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Un Kilo de Ayuda's nutrition education component: Program delivery and user's perceptions in Guerrero, Mexico

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Un Kilo de Ayuda's nutrition education component: Program delivery and user's perceptions in Guerrero, Mexico

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An abstract of
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Abstract

Un Kilo de Ayuda's nutrition education component: Program delivery and user's perceptions in Guerrero, Mexico

By Corey McAuliffe

Background: Worldwide there are few comprehensive nutrition programs that resemble *Un Kilo de Ayuda's (UKA)* structure and objectives. *UKA* is an influential non-governmental nutrition organization working within states of Mexico identified as having high levels of undernutrition in children less than five years of age and pregnant women. *UKA*'s vision is to eradicate child malnutrition in Mexico by the year 2023 through incorporating community, company, and state government relationships to support their comprehensive nutrition program. According to staff, nutrition education is considered to be the most important and critical organizational action. The organization recognizes a high turnover rate of health promoters and staff within their attention centers, in addition to a relatively high variability of community participation within specific communities.

Objective: To capture the adequacy of program delivery; user perceptions; document programmatic successes, challenges, and barriers; in order to provide recommendations for future activities.

Methods: We conducted a qualitative and quantitative review of *UKA's* nutrition education component in Guerrero, Mexico through: collection and review of component materials; observation and assessment of nutrition education sessions; in-depth interviews with all levels of staff; focus group discussions with community participants; and community surveys.

Results: Key themes impacting optimal delivery of the program included: (1) prioritization of other program actions over nutrition education; (2) low levels of job satisfaction and confidence as reported by Health Promoters; (3) ability of Health Promoters to bridge the disconnect between headquarters' perceptions and actual community needs; and (4) reported barriers to increased participation in sessions.

Discussion: *UKA*'s nutrition education component has the potential to affect behavior change and empower women to make healthy and nutritious decisions regarding their own well-being and that of their family. In order to make this a reality, foundational restructuring and prioritization of components, increased support and communication between headquarters and attention center staff, and interventions focused on community needs and desires must be addressed in order to achieve a successful nutrition education component.

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Chapter 1: Introduction

Introduction

The Food and Agriculture Organization estimates that 925 million people in the world are undernourished, with 907 million of them living in developing countries [1]. The 2006 Health and Nutrition Survey found that of children less than five years of age 5% were underweight, 12.7% were stunted, and 1.6% were wasted in Mexico [2]. Subsequently, the southern region of Mexico was found to have elevated levels of malnutrition, where 25.6% of children less than five years of age were stunted [2]. These high levels of malnutrition are even higher among populations who are indigenous, rural, less educated, from lower socioeconomic status levels, and those with little or no access to food and/ or health services [3].

Un Kilo de Ayuda (*UKA*) is a nongovernmental organization founded as a nutrition program in 2000 to address malnutrition in children less than five years of age and in pregnant women living in indigenous and rural areas. *UKA*'s vision is to eradicate child malnutrition in Mexico by the year 2023 through incorporating community, company, and state government relationships to support their comprehensive nutrition program [3]. The six nutrition actions are informed by the inputs of advisory committees, such as The National Institute of Medical Sciences and Nutrition Salvador Zubirán, in addition to The National Public Health Institute in Mexico [3]. The nutrition action items include: nutritional surveillance, anemia detection, nutrition education, neurodevelopment, nutritional packages, and potable water [4]. According to *UKA* staff, nutrition education is considered to be the most important and critical of these six action

items. As of 2010, *UKA* had the economic support of more than 3,300 establishments, including supermarkets, pharmacies and restaurants.

Problem Statement

Worldwide there are few nutrition programs that resemble *UKA's* structure, objectives, and comprehensive approach to reducing malnutrition. *UKA* is an influential non-governmental nutrition organization working within eight Mexican states identified as having moderate to high levels of undernutrition in children less than five years of age. Within their 10 years of service as an integral nutrition program, the organization has not conducted a comprehensive review of its nutrition education component. Recently, the organization recognized a high turnover rate of health promoters and staff within community health centers (centralized headquarters within each state that serve a catchment area). The organization also recognized a relatively high variability of community participation within specific communities.

Purpose Statement

The purpose of this thesis is to review the delivery and user perceptions of *UKA*'s nutrition education component in order to document programmatic successes, challenges, in order to barriers and provide recommendations for future activities.

Research Questions

What do staff and participants perceive to be the successes, barriers, and inefficiencies of *UKA's* nutrition education component? What are participants' concerns in reference to the nutrition education component and the program as a whole?

Significance Statement

In order to improve current nutrition programs and reduce the high prevalence of malnutrition in poor Mexican communities, a review of *UKA's* nutrition education component was needed.

Methods

A qualitative and quantitative review of *UKA's* nutrition education component in Guerrero, Mexico was carried out from May to July of 2010. Methods included 1) collection and review of nutrition education materials used by the program in Guerrero. 2) Observations and assessment of nutrition education sessions held within target communities, for context and appropriateness. 3) Focus group discussions (FGD) and in-depth interviews (IDI) with staff, health education promoters, and community participants to understand perceptions of successes, barriers, and inefficiencies of the nutrition education component. 4) Community surveys with program participants to incorporate a wider range of perspectives specific to *UKA* and the nutrition education component.

Nutrition education materials and observations of the nutrition education sessions were used as evidence to provide contextual support to the qualitative data. The author conducted IDIs and FGDs at the programmatic, state, and participant levels and analyzed transcripts using grounded theory, an analytic inductive approach [5-6]. The author also distributed community surveys to all participants during the nutrition education session and compiled descriptive statistics.

Definition of Terms

CHC	Community Health Center: Centralized headquarters within each state that serves a catchment area
BINP	Bangladesh Integrated Nutrition Program
CCT	Conditional Cash Transfer
EBF	Exclusive breastfeeding
FBS	Food basket supplementation
HAZ	Height-for-age z-score
Health Promoter	*UKA* health promoters, at the state level, responsible for delivering actions to local communities
IDI	In-depth interviews
FGD	Focus group discussions
PHC	Primary Health Care
Platicas	Nutrition education talks given to participants by the Health Promoter
SD	Standard deviation
TPB	Theory of Planned Behavior
UNICEF	United Nations Children Fund
WAZ	Weight-for-age z-score
WHO	World Health Organization

Chapter 2: Literature Review

Malnutrition, a global problem

Undernutrition, a leading cause of morbidity and mortality in developing countries [7], contributes to about 50% of deaths annually (as measured by poor anthropometric status) in children less than five years of age [8-9]. Over two-thirds of these deaths are attributable to inappropriate feeding practices during the first year of life [8], and more than half of these deaths could be averted if children were well nourished before becoming ill [10]. Permanent damage caused by malnutrition happens during critical stages of development in pregnancy and through the first two years of life, reducing cognitive and physical ability, perpetuating poverty, and resulting in lifelong health effects [7, 11-12]. Improvement of nutritional intake for the estimated one-third of all children less than five years of age, who are underweight, stunted, or wasted in developing countries, could potentially increase quality of life and save lives [10-11]. In addition to undernutrition, obesity and diet-related non-communicable diseases are increasingly becoming a problem in the developing world, causing a double burden, termed the "nutrition transition" [11]. In 1978, the Declaration of Alma-Ata was initiated at the International Conference on Primary Health Care (PHC), underlining the importance of the PHC approach, *Health for All* [13]. The declaration reaffirmed health as a human right and highlighted developed and developing country inequities, especially in regards to economic and social development. Participation in one's own health care was declared a human right and duty [13]. Additionally, in accord with the Convention on the Rights of the Child,

> *Nutrition is a crucial, universally recognized component of the child's right to the enjoyment of the highest attainable standard of health as stated in the*

> *Convention on the Rights of the Child. Children have the right to adequate nutrition and access to safe and nutritious food, and both are essential for fulfilling their right to the highest attainable standard of health* [8] (as stated by the WHO).

Key contributors to child malnutrition

The *UNICEF Conceptual Framework of the Determinants of Nutritional Status* shows the basic (potential resources, economic structure, political and ideological framework, and institutions), underlying (food security, caregiver, and health resources), and intermediate (dietary intake and health status) determinants of nutrition status. In order to decrease global and national levels of malnutrition prevalence, interventions should focus on improving basic and underlying determinants of undernutrition [14]. Subsequently, in order to reduce malnutrition at a community and individual level, attention needs to be paid to intermediate determinants, such as dietary intake and health status [15-16]. Breastfeeding, complementary feeding, and hygiene practices play a large role in these intermediate determinants and impact nutritional status of young children. According to the WHO, exclusive breastfeeding (EBF) should occur during the first six months of life, while complementary feeding needs to be timely, adequate, and safe [8, 17]. In developing countries breastfeeding, water supply, and sanitation improvements are critical preventive strategies for diarrhea (which can lead to morbidity and mortality), in addition to weaning education and hygiene promotion [18].

Breastfeeding is an unparalleled way of providing nutritious and ideal food in order for desired healthy development and growth of children [8]. However, globally less than 35% of infants are exclusively breastfed during the first four months of life [8]. While a majority of Mexican mothers reported knowing benefits to EBF, almost one-third of babies were fed teas, water, and/ or formulas within the first week of life [19].

In 2005, an estimated 50% of Mexican women practiced EBF at day five after birth, with an average EBF duration of 2.18 months [20]. In 1999, the national mean duration of breastfeeding in Mexico was 9 months, with 25.7% of women with children less than four months old practicing EBF and 20.3% for children less than 6 months old [20-21].

Historically, breastfeeding duration has typically lasted longer in rural areas than urban areas, and among poorer versus wealthier women [22]. However, these trends have recently shifted with wealthier women increasing duration of breastfeeding, and poorer women decreasing duration [22]. Results show that breastfeeding promotion can be one of the most cost-effective health interventions in preventing death from diarrhea [23]. While breastfeeding strategies can increase survival, additionally there are studies that show no significant impact on stunting [14]. Breastfeeding is a learned behavior; thus family, community, and health care system support, in addition to accurate information, are critical to successful promotion and adoption [8].

Additionally, families need similar support and information for complementary foods and feeding. Often complementary foods are started too early or too late, and are frequently nutritionally inadequate or unsafe [8]. Options to assist in complementary feeding include a supportive environment, nutrition counseling, or nutrient supplementation [8]. Bhutta, et al. found that in food secure populations, complementary feeding education was associated with improved height-for-age z-scores (HAZ), while in food insecure areas HAZ improvements were found when food supplements were given to children with or without education [14]. In a systematic review of complementary feeding by Dewey, et al., education about complementary feeding alone had a modest positive effect on weight and growth, while interventions the with greatest impact

similarly recommended providing animal-source foods regularly to the infant [24]. Additionally, the authors found that complementary food alone (often fortified) showed inconsistent results with two country settings showing a positive impact and three different country settings showing no impact [24]. When complementary food was used paired with another strategy (usually education), two settings indicated that inclusion of a food supplement was more effective than education alone [24]. Dewey, et al.'s, findings indicate that there is "*no single universal 'best' package of components in complementary feeding interventions because the needs of the target population vary greatly*" [24].

When food supplementation was present during pregnancy, results showed increased gestational weight gain, fetal growth, and reduced risk of fetal and neonatal death [25]. Subsequently, while dietary advice during antenatal/ childbirth classes appeared to increase energy and protein consumption, some authors concluded that advice is unlikely to confer major benefits on infant or maternal health [25]. However, in a systematic review by Webb-Girard, et al. nutrition education and counseling during pregnancy found weight gain and birth weight to be improved, but no reduced risk of low birth weight [26]. One review concluded that supplementary feeding interventions must also address the issue of poverty through addressing social and political background [7]. In order to address these contextual backgrounds, people must have access to nutrition education, health care, and sanitation in coordination with supplementary feeding [7].

Malnutrition in Latin America, Mexico, & Guerrero

Within Latin America, major nutritional issues include obesity and micronutrient deficiencies (especially anemia), in addition to stunting, inadequate or inappropriate breastfeeding/ lactation, and low birth weight [27]. In 2007, Mexico had a population of

approximately 100 million people, with just over three million of them living in the state of Guerrero [28-29]. As of 2006, almost 13% of children less than five years of age were stunted in Mexico and an alarming 21.6% were stunted in Guerrero (respectively 5% and 7.6% were underweight) [28, 30]. A child living in a rural area is 1.5 to 3.7 times more likely to be underweight than a child living in an urban area, with indigenous children in Mexico 4 to 5 times more likely to be underweight [12, 28].

In 2005, the state of Guerrero was ranked second highest in Mexico for poverty by food access (42%), capacity (50.2%), and assets (70.2%) [28-29]. Approximately 60% of Guerrero residents had not completed basic education (compared to 46% nationally), 31.6% lived in a home with dirt floors, 34.5% did not have indoor plumbing, 8.5% had no electricity, and 34% did not own a refrigerator (respective national levels: 10%; 11%; 6%; 23%) [28-29]. Due to these statistics, the government of Mexico has classified Guerrero as a high risk state, second only to Chiapas [28-29].

The role of nutrition education in reducing malnutrition

From 1980-1995, a review of 220 studies on the effectiveness of nutrition education interventions found that, "*nutrition education was a significant factor in improving dietary practices when behavior change was set as the goal and when education strategies were directed to that goal"* [31], however many of the intervention effects were modest and did not achieve comprehensive success for all effectiveness criteria [31-32]. Additionally, a systematic review on antenatal/ childbirth education found no consistent results on behavior change; however, "*those receiving prenatal education in conjunction with several other interventions were found to be nearly 50% more likely to perceive mastery for behavior change*" [33]. A review of articles from the

Journal of Nutrition Education and Behavior found that nutrition education was more likely to be effective if focused on specific food and nutrition related behaviors, in addition to addressing social and physical environments within behavior change interventions [34].

Program specific results

Many studies have shown that comprehensive nutrition programs, including a nutrition education component, reduce malnutrition in developing countries [35-38]. However, other studies have shown little to no impact [35, 39-41]. Successful programs also decrease stunting [35-37], increase weight gain [37], significantly improve feeding practices of nutrient dense foods, and increase breastfeeding duration [36-37]. Food supplementation with or without nutrition education has been shown to help enhance nutritional status of young children during developmental periods when nutritional needs are not being met [41]. However, results show that food supplementation alone may not be the best way to prevent malnutrition [41], as basic and underlying determinants are not addressed [15-16].

A randomized controlled trial, using the platform of the Bangladesh Integrated Nutrition program (BINP), showed that groups receiving intensive nutrition education, twice weekly for three months (whether or not they received food supplements), had significant improvement from moderate malnutrition to mild malnutrition or normal nutrition compared to the control group receiving basic BINP services (nutrition education every two weeks). The nutrition education package was shown to effectively prevent growth faltering and malnutrition among young children in all areas [42-43]. Additionally, mothers in both intensive nutrition education intervention groups (with or

without food supplementation) were able to identify malnutrition almost 100% of the time, compared to <25% of control mothers [43]. An additional study looking at the same program, but without the intensive nutrition education, found that the program had limited impact on nutritional status of children with basic BINP services compared to a control group receiving no services [40].

Mexican Comprehensive Nutrition Programs

Mexico has two substantial government run comprehensive nutrition programs, the *Programa de Apoyo Alimentario* (*PAL*) and *Oportunidades*. The *PAL* program undertook a study to examine conditional cash transfer (CCT) versus food basket supplementation (FBS) models in reducing child malnutrition. Both CCT and FBS intervention groups increased consumption in fruits, vegetables, and animal-source foods [44]. Results showed the food basket group to have a significantly greater energy consumption compared to the CCT group, identifying a potential obesity issue as both groups were found to have adequate energy intakes before study initiation [44]. While the original study design included nutrition education as part of the intervention, in the end nutrition education results were not analyzed due to study limitations [44-45].

Mexico's largest comprehensive nutrition program, *Oportunidades*, formally *Progresa*, is a CCT program serving over five million Mexican households. Overall, program results on growth and anemia are positive in the poorest and youngest group participants [35, 46-48], in addition to weight gain for urban children less than six months old [35]. The program has been shown to contribute significantly to the poorest households through improved nutrition, health, and education [49]. Utilization of obligatory program actions, nutrition education and well-baby visits, were higher than for

optional actions, supplemental feeding [49]. Additionally, early enrollment was shown to reduce behavioral problems for all children versus a late treatment group [48]. However, to date, no studies have been conducted specifically on the nutrition education component within either program.

Mexico has a long history of investing money into programs and policies focused on reducing malnutrition in vulnerable groups. Yet often the poorest families, indigenous groups, and children less than two years of age have been the least likely to benefit from programs due to food distribution inadequacy, coordination issues, and weak educational components [47]. Evidence shows that due to inappropriate targeting, efficacy of nutrition programs in Mexico has been low: for example, in 1988 about 45% of malnourished children lived in southern states and 9% in Mexico City, although 51% of families with a malnourished child benefited from food-aid programs in Mexico City compared to only 15% in southern states [47]. Supplementary non-governmental organizations, such as *Un Kilo de Ayuda*, have attempted to fill this gap by targeting these southern states, and specifically rural and indigenous populations [3].

Bridging the gap between large scale programs and communities: Health Promoters

Many studies have looked at *what* works in nutrition research, but fewer studies have delved into *how* it works [50]. Shekar acknowledges that "*a major challenge to improving nutrition is implementing efficacious interventions well and at scale*" [11]. Large scale programs have the difficulty of appropriately implementing wide-reaching activities to small, distinct communities. To bridge this gap, many programs rely on Community-based Health Promoters/ Workers to understand community needs and

deliver health interventions. These health workers have been instrumental in reducing morbidity and mortality in certain settings [51].

Successful program delivery depends on the "*motivation and effective job performance of health workers*" [52]. In order to attain successful workers, employers need to recognize important employee motives such as achievement, affiliation, extension, influence, control, and dependency[1] [51]. In addition to motivating factors, Strasser and Bateman suggest using the General Model of Work Behavior [53] based on the expectancy-valence theory of work performance [54-55]. Whereas workers are "*motivated to perform their duties if they perceive that their performance will lead to valued rewards*" [55]. Additionally, health promoters' performance is affected by appropriate feedback and positive reinforcement of correct practices [56].

A number of studies have been completed in order to understand exactly what challenges, barriers, and successes face Health Promoters[2] in effectively working at the community level. Studies have shown that Health Promoters are motivated and respond positively when feeling valued and confident, perceived the program as valuable, enjoyed work, received training, had a voice in relevant decisions, and were satisfied with their salary and support of the program [57-59]. Health Promoters were also found to have a greater link and dependency on community rewards, feedback, and motivation to their performance than previously thought [56]. Additional studies show a decrease in motivation and job performance when workers are faced with logistical constraints, inadequate salary, and low perception of program value [58-61]. Poor communication, weak supervision, and a lack of supplies have also been shown to adversely affect job

[1] Motives are based on the Motivational Model as stated by Bhattacharyya & Winch, 2001.
[2] The term Health Promoter in this thesis encompasses Community Health Workers, Health Promoters, Nutrition Educators, and those generally involved at distributing information at the community level.

performance [56, 60-61]. Health Promoters often reported that catchment areas are too large to cover and felt overwhelmed and overloaded when given too many tasks and duties [51, 58-59]. While little scientific evidence is available as to the optimal number and mix of activities taken on by promoters, there is consensus that no one person is capable of completing all tasks laid out in the Alma Ata Declaration [62].

Continuity and importance of retention: Keeping Health Promoters satisfied

High attrition rates have been reported as a critical problem in programs using Health Promoters [51, 62]. Retention of staff was reported as essential for maintaining training costs and creating program stability and output [58], as high attrition can lead to a lack of continuity in community and Health Promoter relationships, as well as job effectiveness of Health Promoters [51]. Both monetary and in-kind incentives, supervision, and training are critical and can increase retention [51]. However, monetary awards were shown to be less important than expected. Rather, Health Promoters tended to be more altruistic and had the intention to continue working if they believed strongly in the value of the program [58].

An important factor to retention is appropriateness and frequency of training and capacity given to Health Promoters. Trainings should be competence- and practice-based either within fieldwork or the Health Promoters' local context [56, 62]. Education should be based on community needs, and Health Promoters should have continued education and trainings to constantly refresh and supplement their knowledge base [56, 62]. More effective programs demonstrate appropriate selection, continued education, involvement, and reorientation of health service staff.

Furthermore, ongoing improvement in supervision and support of Health Promoters are necessary for a successful program [62]. Improved supervision and communication, as reported by Health Promoters, could enhance program success and improve educator motivation and development [59]. Large-scale programs tend to have weak supervision and support [63], and supervisors can become discouraged when they lack support from their own supervisors [64]. Increased supervision, including adequate attention and mutual respect, lead to lower low levels of attrition [58]. While this support is vital, even more important is supporting and strengthening the current relationships between Health Promoters' and the communities they serve. Management must recognize and foster this essential relationship, due to the probability of community participants' impact on Health Promoters' job performance and effectiveness [51, 56]. According to Lehmann and Sanders,

> *…numerous programmes have failed in the past because of unrealistic expectations, poor planning and an underestimation of the effort and input required to make them work…In most of the cases that show successful community participation, substantial and time-consuming investments were made in: (a) securing participation of communities; and (b) involving them in all aspects of the programme, including the identification of priorities and project planning* [62].

While dissemination of written procedures is often ineffective, supervision and feedback help to foster a positive work environment [64]. In addition to supportive supervision; logistics, infrastructure, reliable transport, and equipment are identified as crucial components to Health Promoter effectiveness [62].

Conceptualizing behavior change: Theory of Planned Behavior

While Health Promoters are essential for communicating and modeling healthy behavior change messages and interaction, ultimately community members must chose

whether or not to enact change. Beliefs and patterns around food and nutrition are influenced by culture and value systems, in addition to learned behavior [65]. While changes in food behavior and choice may occur slowly or in phases, the structure of change is complex and cannot be linked to a single nutrition education encounter [65]. Through incorporating explanatory models, Yoddumnern-attig, et al. showed project results that nutrition education effectiveness can be facilitated by:

> *(1) recognizing the family as the unit of service, (2) focusing on solutions rather than problems, (3) using a two-stage promotional message strategy to encourage better child caretaking, and (4) viewing potential new practices as behavioral processes, rather than single entities aimed at a specific outcome* [66].

Identifying differences within community members and health educators' explanatory models helps to negotiate conflicts and develop appropriate interventions for behavior change [66]. Additionally an analysis of over 300 studies by Contento showed that nutrition education "*is more likely to be effective when it focuses on behavior / action (rather than knowledge only) and systematically links theory, research and practice*" [67]. Motivational, action, and environmental components are all essential mechanisms within effective nutrition education interventions [67].

The Theory of Planned Behavior [68], introduced originally as the Theory of Reasoned Action in 1967 by Ajzen and Fishbein, is an influential conceptual framework that aims to explain variance within human action and behaviors [69]. In 1986 the model was revised to include perceived behavioral control in order to account for environmental factors out of individuals' control and became the Theory of Planned Behavior (TPB). The model has the ability to predict intention to perform behaviors by measuring attitudes toward the behavior, subjective norms, and perceived behavioral control [68]. These

behavioral intentions in addition to perceived behavioral control account for variance within actual behavior [68].

Attitudes include behavioral beliefs and perceived value of outcomes. Subjective norms incorporate beliefs held by others about the behavior as well as the value of other's beliefs. Lastly, perceived behavioral control contains individual's belief in what they can control and their perceived power in their capability to overcome difficulties [70]. The theory centers around the idea that people make decisions rationally by using available information systematically, and that the most central predictor of behavior is an individual's intention to change [71].

As can be ascertained by other studies and literature reviews, nutrition education is only a component to behavior change. Food knowledge and behaviors linked to nutrition are not aligned linearly [65], rather nutrition education can be incorporated within the *Health Literacy* model, which comprehensively addresses social and economic health determinants [72]. Within the model, nutrition education is a foundational component of health promotion actions, ideally leading to health promotion outcomes, intermediate health outcomes, and finally health and social outcomes. In the end, nutrition education is a component within the model that would ideally assist in leading to greater education in order to achieve behavior change [72].

Economic, political, and cultural context leading to UKA's inception

Through a review of the literature, results show that nutrition education interventions are inextricably linked to country and community context [24]. While Mexico has two large government run programs that incorporate nutrition education into a comprehensive nutrition program, no studies have investigated *how* nutrition education

works within the program and the Mexican context. Conclusively, policy recommendations for Mexico follow much of what the literature has recommended and include: establishing food transfer and primary health care education, and strengthening preventive actions through education in food, nutrition, and other health information [12].

UKA is a nongovernmental organization created to fill a need in Mexico, based on the country's economic, political, and cultural context. Poverty and low academic attainment, coupled with low levels of self efficacy for women and high levels of food insecurity, have fostered an environment rampant with malnutrition [28, 30]. As seen in the literature, Guerrero residents, especially in indigenous and rural areas have high levels of child undernutrition [12, 28] coupled with the onset of adult, and just recently, child obesity [27]. This thesis aims to review *UKA's* nutrition education component, including the program's successes, challenges, and barriers in order to provide recommendations for future activities.

Chapter 3: Methodology

Program Description

UKA's integrated nutrition program (*Programa Integral de Nutrición* or PIN) has six complementary nutritional components consisting of nutritional surveillance, anemia detection, nutrition education, neurodevelopment, nutritional packages, and potable water [4]. Documentation by the organization [73], headquarter staff, and community health center (CHC) level employees considers nutrition education to be the most important and critical component for influencing participant behavior change. The purpose of nutrition education is to prevent risk factors of malnutrition and to promote best practices of food use and nutritional benefits for children [73]. As of April 2010, *UKA* had 16 CHCs in 8 states serving 747 communities throughout the southern and central parts of Mexico. About 32,000 families, 40,000 children and 175,000 Mexicans benefit from the work of *UKA* [74].

According to the organizational mission and vision, *UKA* focuses on rural and indigenous communities identified as populations with high or very high marginalization; some measures for this include height-for-age of children under five, socio-economic status, and education level. The 2004 National Census of Height assists *UKA* in identification of communities with high prevalence of stunting. *UKA* works with communities that have populations between 300 and 3500 people, with preference given to communities within a two hour drive of a CHC. Prior to intervention, *UKA* performs a review of cultural, historical, geographic, and ethnic backgrounds within the region, as well as tries to understand local community customs. Upon entering a community, *UKA* nutrition promoters visit community groups every two weeks to promote the six

nutritional program components for children less than five years of age and pregnant women [3].

Population and sample

Researchers collected all project data through *UKA's* headquarters in Mexico City, the Ometepec CHC in Guerrero (Figure 1), and communities served by the Ometepec CHC. Ometepec is located in the state of Guerrero, about six hours from the organization's headquarters in Mexico City, Mexico. The Ometepec CHC has a large catchment area, encompassing mountainous, coastal, and urban areas. They were chosen for this study by *UKA* headquarter staff due to the high prevalence of child undernutrition as measured by stunting (25.6% at the state level, compared with 12.7% nationally) [2], as well as project feasibility.

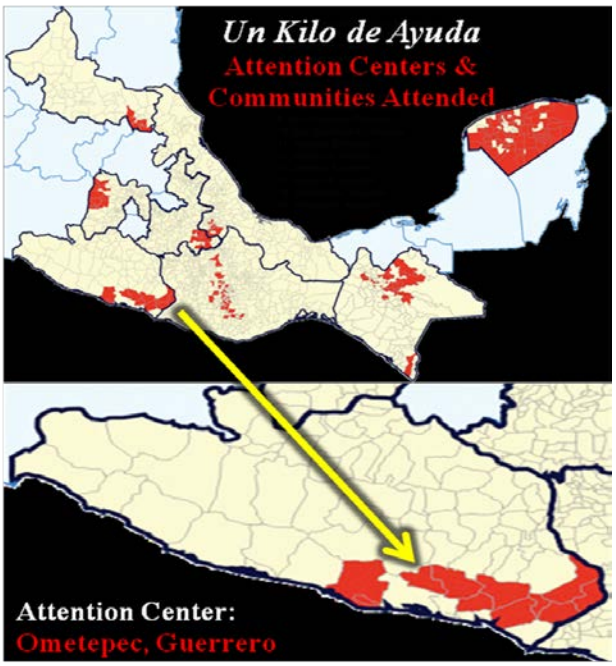


Figure 1: Source [3]

Of the 40 communities attended to by the CHC staff in Ometepec, only village groups that spoke Spanish as their first and prominent language during *UKA* nutrition education sessions and had worked with *UKA* for at least one year as of May 2010 were included (N=28). Community surveys and/ or observational data from the sample population were collected from all 28 communities. Communities where data were collected are located between five and ninety minutes by vehicle from the CHC in

Ometepec. The populations served are often indigenous, rural, and have a high prevalence of malnutrition in children less than five years of age (measured by HAZ). Guerrero staff members had worked at the Ometepec CHC with *UKA* for eighteen months up to seven years.

The study population included *UKA* staff from Mexico City, Ometepec CHC manager and health promoters, community participants who were pregnant or had children less than five years of age, and volunteer community assistants who attended and helped at the nutrition education sessions between May and July 2010. All community participants were able to communicate in Spanish and lived in a community that had worked with *UKA* for at least one year prior to May 2010.

Research design

A mixed methods review of *UKA's* nutrition education component was conducted from May 2010 to July 2010. Data were collected from the Ometepec CHC in Guerrero and the headquarters in Mexico City, Mexico. All data collected are related to *UKA's* nutrition education component. All curriculum materials available and pertaining to exclusive breastfeeding, complementary foods, and diarrhea (including current training manuals, session materials, documents, etc.) were requested from the Mexico City headquarters and Ometepec CHC. Health education promoters' delivery of the nutrition education component was observed using a structured observation guide to assess the context and appropriateness [Appendix A]. In-depth interviews with headquarter staff, CHC staff (including manager and health education promoters), and focus group discussions with community members were conducted to document programmatic successes, challenges, and gaps.

Curriculum Materials

All curriculum materials available for documentation were obtained through *UKA's* headquarters in Mexico City and the Ometepec CHC with their expressed permission. All materials available and used currently by health promoters and all information disseminated on breastfeeding, complementary feeding, and diarrhea were requested. These topics were deemed the most important nutrition education topics by the *UKA* project supervisor and included: a training manual created by Ometepec CHC staff, recipes given to participants, census data collected by *UKA*, and education information (e.g. handouts, flipcharts, participatory based activities, etc.). Access to all *UKA* statistical data (including height, weight, household statistics, anemia status, etc.) was also available to researchers.

Observations of Nutrition Education Delivery Component

Four to five nutrition education sessions were observed per promoter with seventeen different community groups, in order to maximize heterogeneity of session due to time constraints. At least one session was observed per geographic region (mountain, coast, Ometepec – urban/town, mountain/coastal) per health promoter. Feasibility of scheduling, availability of transportation, and community demographics (specifically number of pregnant women and women with children less than two years of age) was taken into account when selecting observation communities.

At the time of this study, four health promoters worked at the Ometepec CHC. Health promoters visited communities once every two weeks, and approximately one to two community groups daily. To ensure each health promoter was observed four to five times in different communities, while giving a session on a different nutrition education

topic (including breastfeeding, complementary feeding, diarrhea and hygiene), a total of six observations were conducted during the first two weeks, six during the second two weeks, and five during the last three weeks of the observation period.

The observer used a structured guide to capture information on the delivery of the nutrition education session [Appendix B]. Documentation using the guide included basic information on the group and community, setting and location, design and delivery, participation, and information provided and materials used. Additionally, the Health Promoter's name, community name, municipality, and region were all recorded. All materials used during the observation were either photographed or obtained through permission of the health promoter. Observations were compiled and used to supplement information obtained from IDIs and FGDs with staff, health promoters, and community participants.

In-depth Interviews and Focus Group Discussions

Prior to arrival in Mexico, *UKA* staff in Mexico and Emory professors worked with the researcher to develop socially- and culturally-appropriate IDI and FGD guides. The guides addressed *UKA* staff's concerns of the nutrition education component as well as explored headquarter staff, CHC staff (including the manager and health promoters), and community perceptions on the successes, challenges, and gaps in the program. The tool was created in English and translated into Spanish. A native Spanish speaker reviewed the IDI guides, while the Ometepec Manager and a Health Promoter reviewed the FGD guide. Guides were reviewed for both accuracy and meaning.

UKA Staff

Two *UKA* staff members who were identified by the site supervisor as those most knowledgeable about the nutrition education component were asked to participate in an IDI. The purpose of these initial interviews was to understand the mission and vision of the organization and expectations of the nutrition education component and of those involved. The two Mexico City staff members who had the most information on the nutrition education component and were available on the day of the interview were asked to participate. Both agreed and gave informed consent.

IDIs were chosen as the best method of data collection in order to gain formative information for future interviews and FGDs. Only two interviews were needed to attain saturation, as the questions focused on the background, goals, and vision of the organization. Questions also focused on the nature and goals of the nutrition education component. All questions about the Health Promoters and community participants were related to how the staff members perceived the Health Promoters and community participants' roles and acceptance of the nutrition education component. Interviews took on average one hour.

Ometepec Center Manager and Health Promoters

The Manager and four Health Promoters (CHC staff), in Ometepec, Guerrero, were asked to participate in IDIs during the first two weeks of data collection. IDIs were chosen over a FGD as each promoter had their own individualistic style and perceptions of the program. The interviews were potentially sensitive in nature, as employees of *UKA* gave personal information and both negative and positive critiques of the nutrition education component. Due to the Manager and Health Promoters' close relationship to

the organization, curriculum, and participants, the focus of the interviews was on their perceptions of the program (including successes, challenges, and identified gaps) as well as ideas and recommendations for improving the nutrition education component. Additional contextual information was collected through participant observation and informal conversations with all CHC staff, including the manager, health promoters, doctor, accountant, and warehouse staff.

Community Participants

Four communities participated in the FGDs, with four to six community volunteers in each of the discussions. The *UKA* Ometepec manager was consulted as to the feasibility of conducting focus groups in elected communities. The Manager was asked for his perception on whether or not the communities were diverse and would have different insights and experiences. The following guidelines informed community selection:

1. Community was observed during the nutrition education delivery component.
2. Community had ten or more children under two and pregnant women (due to lack of availability and/ or willingness of participants to volunteer).
3. One community chosen per promoter.
4. One community chosen per region: Coast, Mountain, Mountain/Coast, Ometepec – town/urban.
5. At least one observation per topic observed (breastfeeding, complementary feeding, and diarrhea and hygiene).
6. Communities with higher number of possible participants were favored due to the possibility of low participation levels.
7. Feasibility of Health Promoter's schedule and availability of community participants.

Prior to conducting the four FGDs, the guide was piloted in an additional community. Pilot test results showed that participation of community members was low and recruitment of available participants with children less than two years of age was difficult. The pilot discussion was held outdoors and with children present, making it

difficult to hear recorded audio. As a result, discussion questions, recruitment methodology, and interview locations were modified in subsequent FGDs. Modifications included recruiting participants during the *UKA* community sessions and conducting the FGD during the *UKA* program session to ensure availability for participation. Volunteers willing to participate were prioritized if they were pregnant and/ or had children less than two years of age. However, there were not sufficient volunteers to meet this criterion and in the end, recruitment was supplemented by other organization participants willing to participate. Women who had a child or children present with them at the session were asked to leave their child/ children with a friend or family member. An exception was made for children less than six months of age or who needed to nurse during the FGD. FGDs were held away from the community sessions in a private indoor location.

Four to six women participated in each FGD. All volunteers gave their verbal consent to participate. FGDs lasted approximately one hour, and participants received everything provided during the community session they missed. Bottled water was served to each participant in addition to a small gift of food in compensation for participation. Volunteers were unaware of these small gifts when asked to participate.

FGDs were the selected format due to the nature of the data being collected (not sensitive) which centered on a sense of community reaction to the nutrition education sessions. Community FGD questions were informed through previous IDIs with *UKA* headquarter and CHC staff. Questions sought to clarify how the design, delivery and user uptake of the nutrition education component could be improved using participants' perceptions of the successes, challenges, and gaps of the nutrition education component.

IDI and FGD Transcript Analysis

Analysis of the IDIs and FGDs transcripts was completed using MAXQDA [75]. Themes were identified inductively and deductively through memos and coding, as well as thick descriptions and comparisons of data. Thematic analysis, described by Liamputtong and Ezzy as using an inductive approach through observation, was used to analyze data [6]. Concepts, categories, and themes were identified and explored throughout data collection. They were then analyzed to form relationships between categories in order to conceptualize a 'formal theory' [5] of the various levels, layers, and interactions within the organization. Conceptual frameworks of the Health Literacy Model, the General Model of Work Behavior, and the Motivation Model helped to inform transcript analysis, in addition to the theoretical framework of the Theory of Planned Behavior. Data were additionally analyzed in order to make recommendations to improve the organization's nutrition education component.

Community Surveys

Time and feasibility limited the number of communities chosen to participate in FGDs, with participants in only four communities sharing their perceptions. Community surveys were created to supplement the FGDs with those who were not able to participate in a FGD. The community surveys were conducted to collect the perspectives of a wider range of participants and verify qualitative research findings. Over 600 community surveys were completed in 27 of the 28 communities that met overall study criteria. One community was omitted due to a postponed community visitation by the health promoter. Participants completed the surveys during the final two weeks of data collection with

reportedly high levels of participation, observationally given by the Health Promoters and community assistants.

Community surveys were voluntary. Health Promoters provided the surveys to volunteer community assistants in envelopes with directions and explanations of the survey and specific questions. Community assistants distributed the survey to community participants. Community assistants helped women that could not read and/ or write. After the surveys were completed, the participants were asked to put them in the envelopes, seal them and return them to the Health Promoters who returned them to the main office in Ometepec after the session.

The community survey used a variety of response types including quantitative (i.e. ranking of activities and levels of satisfaction with program) and qualitative (open-ended responses) data [Appendix C]. The survey was informed by themes and issues found within *UKA* headquarter and Ometepec CHC staff interviews, as well as the FGDs within the communities. The survey was written in Spanish and reviewed by three native speakers to ensure accuracy and meaning. The Ometepec Manager, as well as one Health Promoter assisted in formatting and wording.

Surveys were analyzed using SAS to generate descriptive statistics [76]. Open-ended responses were coded to quantify reoccurring themes [Appendix D]. Survey data on Health Promoter performance was used only as supporting evidence to FGD findings and was de-identified.

International Review Board (IRB) Consideration

The project was submitted to Emory's IRB for approval. Data collected were for a programmatic assessment by the organization, thus Emory IRB concluded that approval

was not needed. The proposed study participants were men and women aged 18 years and older. No vulnerable populations, including children, were used in the data collection**.** Informed consent was obtained verbally before any IDI or FGD. Instructions were given before the activity began. Participation in any activity was completely voluntary, in no way was any participants' job or status within the program subject to change due to participation status. Participants were made aware that they may withdraw from an activity at any point, their anonymity would be secure, and that data would be held in a secure and confidential location. The researcher had completed the *CITI Course in the Protection of Human Research Subjects* and ensured that there was no coercion or harm to any participant involved. Anonymity and confidentially are of the utmost importance and were ensured through de-identification of data and completion of IDIs and FGDs were conducted in a private area.

Chapter 4: Results

Results

UKA was found to work at three distinct levels: foundational and organizational (headquarters), community health center (CHC level staff: Health Promoters, Manager, as well as additional staff members), and community (communities and participants). Seven IDIs were completed with *UKA* headquarter staff (N=2) and Ometepec CHC staff, including the Manager and all Ometepec Health Promoters (N=5). Four FGDs were conducted with 22 community participants in order to capture perceptions at all organization levels. Seventeen observations of nutrition education sessions delivered by Health Promoters were completed, while community survey results were collected from 624 respondents, in 27 communities, in order to understand perceived successes, barriers and inefficiencies of *UKA's* nutrition education component. Of the survey respondents, 34 were pregnant, 545 participants had at least one eligible child (<5 years) or were pregnant, 53 participants had at least two eligible children or one eligible child and were pregnant, and five participants had at least three eligible children or two eligible children and were pregnant (79 participants did not respond to this question).

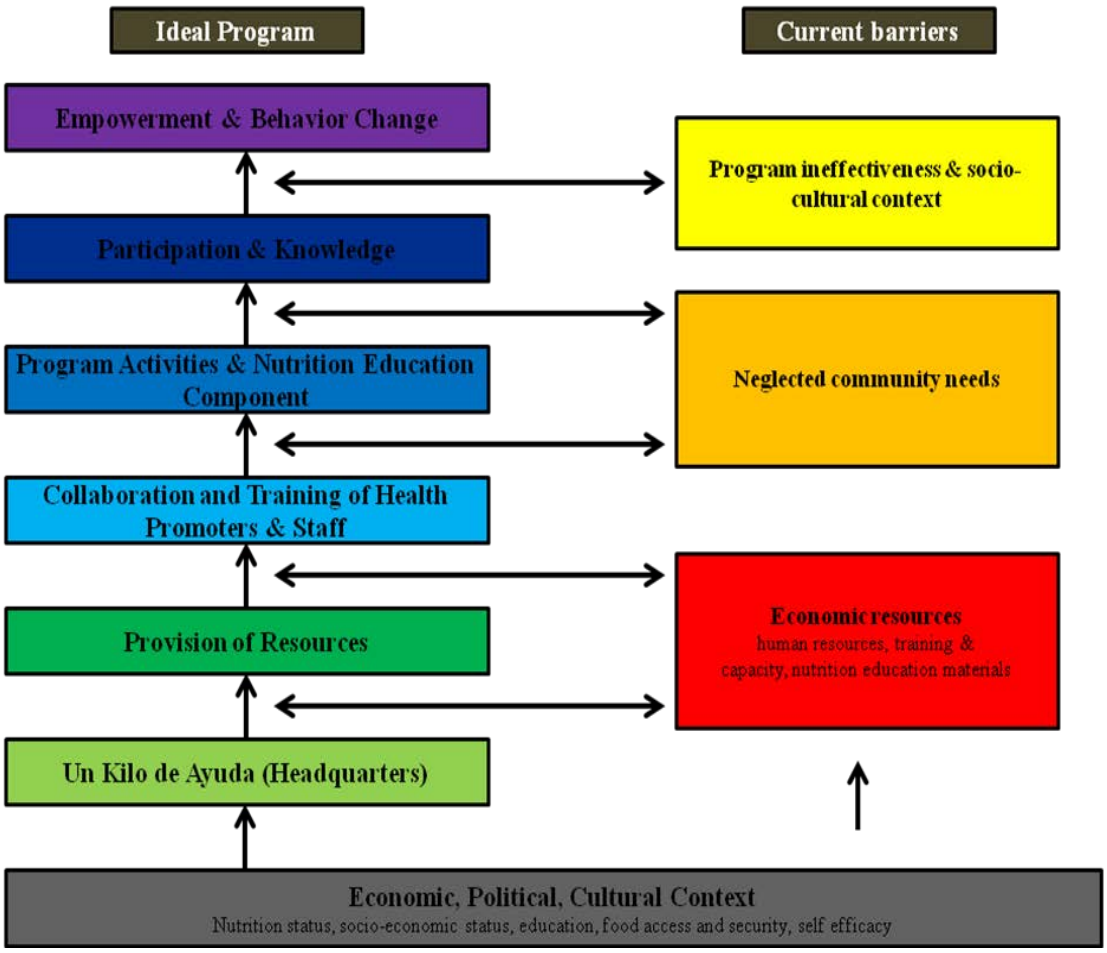
All staff identified undernutrition as the most prevalent form of child malnutrition in the area, exacerbated by low female education levels and limited access to medical care and appropriate foods. Staff, in addition to some FGD participants, identified cultural beliefs, customs, and traditions as inhibiting improvements in child nutrition. This socio-cultural context normalized undernutrition, as can be seen through this statement,

> *…she has 3 children, I think the girl is the oldest one, but she is severe and she doesn't have much height, the oldest girl is a thin girl, the son that follows is also thin and, both me and the doctor have told the woman that her child is missing*

> *nutrition and also hygiene, but she says it's not that, because all of her family is thin. The child must be 1 year old, and he is severe, this means that the mother says that that's the way her son is, and it doesn't matter what we do, the child he's not going to have the right weight* (Health Promoter).

Undernutrition was additionally perpetuated by self medication, use of home remedies, unhygienic practices, and inappropriate breastfeeding and complementary feeding practices. Staff members acknowledged that a lack of resources, both financial and educational underlay the lack of progress on malnutrition in these communities.

Figure 2. Conceptual framework of *UKA's* current barriers impeding programmatic success



Barriers that impede *UKA* from reaching its program goal: "*together with other organizations, civil society groups, government, enterprises, and academic institutions, to be able to generate opportunities of development for people and create a Mexico where*

people are truly free and where there is no inequality" (Headquarter Staff), and achieving success through community empowerment and behavior change are depicted in Figure 2.

This thesis completed a review of the nutrition education component and found five key themes impacting optimal delivery of the program: (1) verbal and actual priority of nutrition education is not equivalent. (2) Low levels of job satisfaction and confidence by Health Promoters is due to a lack of headquarter support. (3) Disconnect between headquarters' perceptions and actual community needs has been bridged by CHC staff. (4) Redundancy, comprehensibility, and length of sessions are major barriers to increased participation in sessions. (5) And prioritization of nutritional packages dissolves trust, introduce stigma, and additionally burden overwhelmed Health Promoters. Additionally, Headquarter and CHC staff previously identified: high attrition of Health Promoters, varied levels of community participation, and a disconnect between the various organizational levels as critical impediments to program success. Key themes are discussed below.

Prioritization of actions: the nutrition education component disconnect

The nutrition education component is one of six actions outlined by the organization's objectives, and reported by staff to be the most critical and fundamental component to achieving program success. Specifically, headquarter personnel stated,

> *…we do think that education is the cornerstone to fighting malnutrition. Why? Well because, the moment we stop delivering packages to the communities, the moment Un Kilo de Ayuda stops coming, the only thing moms will have to help their children, is the information they might have acquired, so, that is why education has to be the most important part* (Headquarter Staff).

Despite this verbal acknowledgement by headquarters that nutrition education was the top priority, staff reported that there was no allocation of budget or appropriate staff time dedicated to the nutrition education component, "*if we want this [nutrition education] 'action' to be our strongest 'action' then we need people to work full time on that"* (Headquarter Staff). Additionally, staff acknowledged "*even though it has to be the most important part,"* they identified nutrition education as *"the weakest part of the program"* (Headquarter Staff).

CHC staff additionally reported wanting other actions to be supplemental to nutrition education. They felt behavior change could not be achieved without participants understanding what the problem was, how it was caused, the importance of eliminating it, and how to do so. While the Ometepec CHC staff attempted to put more emphasis on nutrition education, they reported a lack of training and capacity, supervision, and support necessary to strengthen the nutrition education component, "*unfortunately it [education] is not a priority, it's the last thing of the day, but I think you achieve to make people aware. If there was more continuity to it and we made an effort, I think you could see the change*" (CHC Staff). Staff reported feeling that they had too many activities to complete and found it difficult to prioritize the most important actions. While nutrition education is reported by all staff as the most important action for participant behavior change, there are few resources allocated, indicating that there is a disconnect between verbal and actual prioritization.

Headquarter personnel's relationship and connection to CHC staff

To make nutrition education a priority at the community level, CHC staff indicated the need for logistical and financial support from headquarters, and a

relationship in which both headquarters and the CHC could rely on and trust one another. All staff recognized a need for training and capacity of CHC staff on nutrition education, group management, conflict resolution, and community needs assessment. Additionally, staff recognized the need for increased supervision, collaboration, and site visits by headquarter supervisors. Many CHC staff's complaints stem from a lack of communication, organization, and resource support from headquarter staff. According to CHC staff, increased communication between themselves and headquarters would help the CHC to stay more organized and assist in prioritizing actions based on organizational standards.

While CHC staff reported high levels of satisfaction towards the type of work they chose, they reported low levels of satisfaction with the structure of their current job and support from headquarters. Due to the lack of training and support by the headquarters, staff reported feeling *limited* in their ability to carry out the nutrition education component,

> *we are asked to meet an action at 100% but they don't give us any tools to do it, so somehow you feel limited and frustrated and say 'well you're asking me to do a job for which I'm not qualified and you're not training me' so I think in that matter we feel, I feel, limited. I tried to do research but there's not an expert who could tell me if I'm on the right track, or there's something missing. So in that sense it's frustrating…it would be better to have a little more support* (CHC Staff).

Additionally, promoters reported feeling *lost* and *afraid* because there was no guide or expert to use as an aid,

> *Yes, we've talked about the training we're supposed to have. There are times, when we are afraid, because sometimes people from the headquarters come, and we, we have to create new materials, because of the people's needs, so, sometimes, they come and they ask us, 'Why are you doing this? Why don't you do this instead?* (Health Promoter).

Headquarter staff reported often being unaware of Health Promoters' job capabilities, and relied heavily on the CHC manager to provide supervision and assistance. Health Promoters reported feeling very supported at the CHC level, and indicated that the lack of support lay between the CHC and headquarters. It was made clear that issues are dealt with at the state level, as no CHC staff felt headquarters would be able to provide helpful feedback or support,

> *it is here where we understand more, where we understand each other better, because if we go to the headquarters, where there's supposed to be a training, well we usually don't find any answers…this is where we have to solve it. We're very clear on that* (CHC Staff).

UKA and CHC staff reported that the most common reasons for high turnover rates were low salary, better opportunities elsewhere, no room for professional growth/ promotions, no training, lack of motivation/ support/ communication, stress, exhaustion, and program's prioritization on acquiring finances over the needs of personnel. Due to the lack of training and support, CHC staff reported that their loyalty was no longer to the organization, but rather to the participants and communities,

> *It's more like living for Un Kilo. And we, well, we do it with pleasure, but we know that our commitment is more with the people than with the institution. Yes, with the people because they are the ones we see every day. And they are also the ones who during the hard times support us in doing something*" (CHC Staff).

Health Promoters reported working up to 15 or 16 hours a day, seven days a week[3], into the night, not having a social or family life, and not always having time to eat. In addition, driving was a further issue for CHC staff. Drive time to communities, which reportedly ranged from five minutes to two hours one-way, was a major source of time lost, "*What takes the most time is the transportation, the time it takes us to get to the community. Sometimes we spend more time in the car than when we are capturing data;*

[3] Ometepec staff is required to work six days due to the distance they must travel to arrive at all communities.

it's like an hour, hour and a half, two hours" (CHC Staff). Some promoters were unable to drive or lacked confidence in their ability, putting an extra burden on colleagues. As observed, promoters commuted on average 49 minutes one-way to a community, ranging on average from 33-71 minutes by promoter.

Health Promoters' response to headquarters disconnect with community needs

With regards to the nutrition education sessions, headquarters currently has the final say on which topics are addressed. However, staff reported that headquarters' decisions on what should be included were often unfounded in actual community needs,

> *They wouldn't do investigations about activities, it was just about what they thought could be useful, or sometimes it's just in one State. Yes? For example the State of Mexico is closest to them, they would see 'oh, this is what they need', well based on that, that was like their reference to send us the information. Yes? They would say 'if it works here, or if we have these problems here, then certainly we have them everywhere else'*" (CHC Staff).

Headquarter staff also reported hearing requests from women for other nutrition education materials (e.g. obesity prevention, hypertension and diabetes education, etc.), but currently they were disregarding those requests.

While Health Promoters reported not feeling supported in their role or activities by headquarters, they responded to that adversity through supporting one another within the CHC and successfully bridging a wide gap between headquarters and the communities. As part of their job description, each CHC is responsible for the design and development of that state's nutrition education component, including research of information and creation of didactic materials, talks, interactive activities, and workshops,

> *…basically the program doesn't have a guide or training for us, we are just told to talk about some basic topics…it all emerges from reading from researching, from deciding which activities we can or can't use, but we don't really have a*

> *guide. We plan it monthly, or according to a diagnosis that we made about the community* (Health Promoter).

However, due to the lack of structure and supervision in this endeavor, previous efforts at accumulating information and materials were quadrupled through individual work. Indeed, CHC staff reported a significant portion of their time was spent researching community needs and creating nutrition education materials to meet those needs.

Within the current structure of material delivery and dissemination of nutrition education information, CHC staff recognized a need to increase effectiveness and efficiency of the nutrition education component within the Ometepec catchment area. Through their basic community needs assessment and headquarters' prioritization of topics, they created a manual in order to be more effective and efficient,

> *We said let's do it, let's write it and measure it, so that they can see that we are getting our job done, because previously it was like we went and gave a talk but nobody knew if we gave it or not, and it was really exhausting and it was a job done four times more, because we all gave the same talk and then each one did his own research and worked separately; so we said let's sit down and let's organize this…so that it is less work* (CHC Staff).

This manual had been completed at the time of interviews, and Health Promoters had begun integrating it into their bi-weekly community sessions. CHC staff felt the most important way to impact behavior change was through interactive learning, specifically activities and workshops, and were trying to incorporate these types of activities into the manual.

Headquarters recognized Ometepec CHC staff's strength and capability at the state and organizational level. Health Promoters viewed themselves as a critical organizational component as well, "*I think of the promoter as the fundamental piece of the program, because it's through [the Health Promoters] that we'll achieve the change*

and the improvement of the children…the improvement or worsening of the families depends on us" (Health Promoter).

Health Promoters play a central role in bridging the gap between managerial staff and community participants. One of their roles is to facilitate and assist in participant behavior change through program actions. Health Promoters identified a strong relationship between promoters and participants, built on trust, is essential for acceptance and behavior change,

> *we know that in order to teach them and for them to learn, they have to be willing to learn, but if you treat them arrogantly they're not going to pay attention to you, let alone, be motivated to learn. So you have to gain their trust, you have to make them want to be here and make them want to do things voluntarily. So that's what we're doing right now* (CHC Staff).

Ometepec CHC staff have successfully begun to build these relationships, with more than 95% of community survey respondents rating their Health Promoter as excellent or good (Table 1). However, promoters indicated that without future financial and logistical support from headquarters, a constant turnover of health promoters would likely damage program ties with communities.

Table 1: Community survey respondents' perceived quality of Health Promoter, self participation, and group participation levels during UKA sessions (N=599; Missing=25)

	Perceived quality of Health Promoter		Level of self perceived participation at session		Level of perceived group's participation at sessions	
	Frequency	Percent	Frequency	Percent	Frequency	Percent
Excellent	307	51.25	94	15.8	54	9.06
Good	263	43.91	292	49.08	269	45.13
Fair	29	4.84	207	34.79	256	42.95
Poor	0	0	2	0.34	17	2.85

Barriers to increased community participation

Health promoters reported struggling with participant recruitment and/ or retention to the program due to redundancy, length of session time, and

comprehensibility, in addition to education levels, language, family pressures, and stress. Health Promoters and participants both reported that a major barrier to a strong nutrition education component was the fact that women found the information repetitive. Many participants were part of other outside organizations, such as *Oportunidades,* which gave similar nutrition education talks,

> *…they tell us that they've already heard that information, that they know it already…moms even knew what the next topic was going to be…they would tell us they understood the information we were giving them, but the problem was that they were not putting it into practice…they say 'yeah, we know that already, they tell us this at the health center as well. The problem is we, some moms tell us that they don't do it 'we don't do it'* (CHC Staff).

Through the community survey, 61% of participants requested more information during sessions (<6% of women reported wanting less), as well as a nutrition education session at every two week visit, as compared to monthly or bi-monthly sessions (Table 2).

While participants did ask for increased or new information, they also requested a decrease in allocated time to nutrition education. Women reported becoming *bored*, *sleepy*, or *restless* when the sessions lasted *too long*, "*the talk sometimes is too long for us, not only the child gets bored but the mom as well"* (FGD Participant). However, women did not come to a consensus as to how long was *too long*. Women additionally reported:

> ***Participant #5:*** *The people who are not paying attention are the ones who get bored, they just don't like it*
> ***Participant #2:*** *But yeah, we would like it to be a little shorter because yeah…*
> ***Participant #5:*** *The thing is, that sometimes it takes too long, sometimes it is not, but sometimes it is a long time*

FGD participants suggested varying times for appropriate nutrition education session length ranging from fifteen minutes to one hour. However, over 60% of survey participants requested that the sessions last for <30 minutes, although 18% of participants preferred an hour or more per session (Table 2). FGD participants also stated that Health

Promoters were often unorganized at the beginning of a session and sessions started late. Health Promoters and participants reported that this was often due to session logistics, unloading packages, calling role, and set up time.

While promoters reported participants' inability to remember nutrition education topics or activities, contrarily FGD participants easily recalled important components and information from *UKA* sessions. However, some participants reported not always being able to remember everything. Almost 60% of community survey participants reported understanding a majority or all of the material; however, almost one-third (~30%) of participants reported understanding only a fair amount of information given during the nutrition education sessions (Table 2).

Education level and understanding of materials was reported by staff as a barrier to participant behavior change in addition to a lack of willingness to participate and access to specific foods (especially vegetables). An additional reported barrier from both CHC staff and participants related to the empowerment of women,

> *I know families where the mother is subject to her husband, and it's difficult to make them understand that they are important to their family, but if we tell them that then the husband will get mad, because we are teaching her not to obey him. This part of working at the community it's really complex, and I think it affects the nutrition education a lot* (CHC Staff).

Reportedly, some husbands would not let their wives come to the session if the family could not afford the package.

Participants reported learning best from practice, although one participant added that understanding the theory before putting it into practice was most helpful to incorporation of information given. Health Promoters theorized that more interaction and dynamic activities will impact positive participant behavior changes. In support of this

theory, about 62% of respondents felt they learned best through workshops or activities, the rest preferred *platicas* (Table 3**)**.

While health promoters reported being discouraged by the slow pace of participant behavior change, participants reported finding education sessions informative and helpful,

> ***Participant #4:*** *For example, we used to give our children medicine just like that, but they [health promoters] say that there are some medicines that are not really for children, so those are the ones that make them even sicker, instead of better.*
> ***Participant #2:*** *Yeah, for example, we will always remember that from now on. So when our children get sick we know that we don't have to self-medicate them, because we didn't know that then, at least, I didn't.*
> ***Participant #3:*** *Yeah because we used to give them anything, if some medicine worked for someone, then it will work for someone else, but they tell us [people at Un Kilo] that it is not the same body.*
> ***Participant #4:*** *And sometimes they say, that instead of getting better you get worse, because if you keep taking the same drug, then the virus develops a resistance to the medicine…and then it stops working [the drug].*
> ***Participant #2:*** *That's why we say that the platicas are important indeed*

Additionally, 55% of the survey respondents stated that the nutrition education component or information they had received from the sessions was their favorite thing about *UKA* (Table 2).

Food package as a contribution to program discontent

All interviews and discussion groups aimed to focus on nutrition education, but invariably led to discussing the food package. Reported behaviors and acceptance of the food package were by far the most variable of any subject. CHC staff was vocal in their dislike of the food package and the way in which it impacted other actions. Health promoters reported feeling anxious that food package products had not been arriving on-time and that their abilities within communities were limited by not having a complete food package available,

> *When we go to the communities without the products for example, now we are out of excuses [laughs] so I think the package plays a very important role in the bonding with the women, so to go without the food it's a very big problem. It doesn't allow you to perform the activities you planned and you don't have the participation you need, so I think that is one of the main problems* (CHC Staff).

Promoters recognized this problem as a threat to their reliability and dependability as seen by the community, which could possibly reduce trust between community members and *UKA* staff.

Health promoters reported that women, due to other organizations giving food supplements or money to participants, in addition to *UKA's* original food-based strategy and mission, expect things to be free,

> *And when we arrive to a community the first thing people asks us is 'what are you going to give us?' they ask what are they going to get for free, and from there I consider it a restriction, because you have to say that they have to give 65 pesos, and that causes from the first session, that 50% of the women leave. Because when we say we are "un kilo de ayuda" the word "help" means that you are going to give it for free, and because we are charging for it, that's how they see it, it's not a help and it's not… so it's all about the package* (CHC Staff).

While participants do report some behavior change and knowledge learned from the nutrition education sessions, one of the biggest reported challenges is getting participants to attend sessions in the first place, especially when participants do not receive anything in return,

> *Because we charge a fee, and sometimes they come and tell us 'you shouldn't charge.' Ok now, the word we use in the program is 'Ayuda' [help], it has a lot of meanings, so, sometimes this 'ayuda' word, the concept moms have about this word is a little bit different to ours. We say 'Ayuda', and moms understand it as, you are supposed to give her, and you won't ask for anything in return, and we're not going to ask them to do anything, that we're simply going to give them…so, a lot of moms say, 'I'll live from what you give me, and I won't do anything, because I'm poor, because, umm I'm unemployed.' So, that is a challenge, right? Making them understand that 'ayuda' means helping one another…it's not like, 'I'm just giving you' instead it is like, it's like a feedback. It's like the hardest challenge we've faced* (CHC Staff).

FGD participants reported similar stories of women coming to sessions to only receive a food package. While every FGD participant reported that *they* would continue to coming

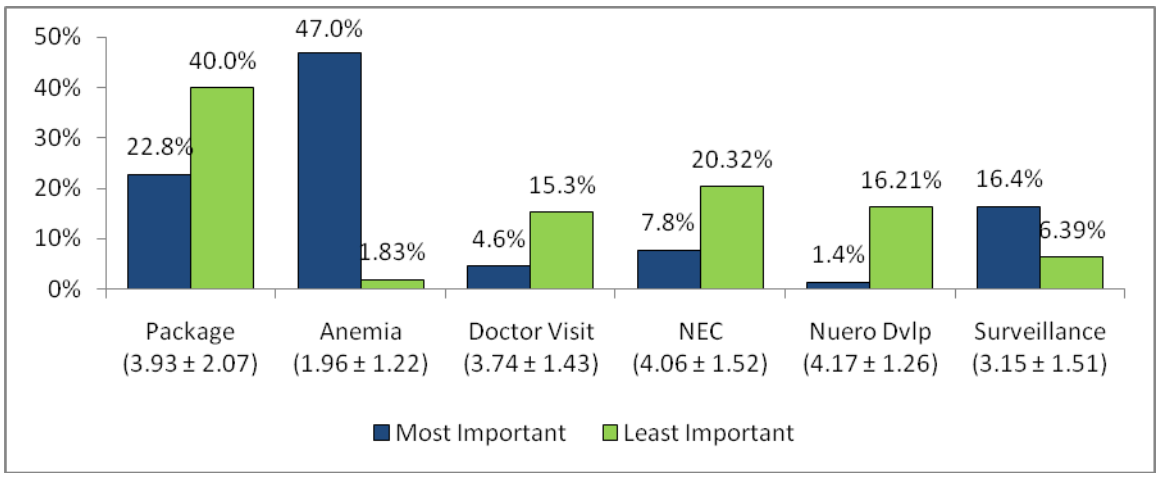
to sessions if a food package were no longer available, they quickly followed it up by saying, 'but many *other* women would not continue to come.' CHC staff is convinced that *no one* would come if they discontinued use of the food packages. In one FGD the women recognized that while they felt people may come, the case in point proved the opposite:

> ***Participant #3:*** *that's what the majority thinks, in the afternoon group a rumor that the packages were not going to be delivered anymore started*
> ***Participant #4:*** *and not everyone came*
> ***Participant #3:*** *not everybody came, it was like 1:15 when we arrived and there were just like 3 or 4 people*
> ***Participant #2:*** *I think that there are a lot of people that are more interested in the package, and they are not interested…*
> ***Participant #1:*** *(interrupts) in the rest*
> ***Participant #2:*** *if their baby has malnutrition, they only care about the package*
> ***Participant #1:*** *but there are people that they truly care about their children*
> ***Participant #2:*** *and there are people that say that they are more interested in their children, in getting the anemia test because the health center doesn't do it and they don't give iron for free, they don't give it away, then they have to buy it… so it's ok.*
> ***Participant #4:*** *I would keep coming*
> ***Interviewer:*** *so there are mothers that will come?*
> ***Participant #2:*** *and some that won't, definitely*

While purchasing a food package is not required, many women are confused as to what they actually pay for. According to the organization, women subsidize one-third of all services (including anemia testing, staff salary, packages, etc.) provided by the organization, not just a portion of the food package. Since women still receive all services (expect the food package) when they do not pay, it appears to the women that they are only paying for a portion of the food package. Health promoters reported struggling with participant recruitment and/ or retention to the program due to fees for the food package and embarrassment if not purchasing during a session. Even when women understood that they can attend sessions without purchasing a food package, participants reported being embarrassed to show up without money.

The variability of importance stated for the food package is best seen in the community survey. Participants were asked, in order (1=most; 6=least), to rank importance of *UKA* services for themselves and their families in relation to their child's health and well-being. Choices included: food (package); nutrition education; anemia surveillance and treatment; neurological development; doctor visits; and surveillance (height and weight monitoring). Almost 63% of respondents ranked the food package as

Figure 3: Percent of Community Survey Participants who Ranked *UKA* Activities as Most and Least Important (Mean Rank ± SD*)



Note: (N=438); Most Important = 1, Least Important = 6; Order of ranking: #1 Anemia (1.96); #2 Surveillance (3.15); #3 Doctor visit (1.22); #4 Package (3.93); #5 Nutrition Education Component (4.06); #6 Neurological development (4.17); *Lowest mean rank indicates highest priority to survey participants

being either the most or least important service, showing extreme view points (22.8% most important; 40% least important). About 47% of participants felt anemia surveillance and treatment to be the most important component, while only 1.8% of participants felt it was the least important (Figure 3). Mean ranking scores from most to least important were as follows: anemia surveillance and treatment, surveillance (height and weight monitoring), doctor visits, food (package), nutrition education, and neurological development; nutrition education being one of the least valued components of the listed activities.

All levels of staff reported that the food package should not be the focus of the program nor does it facilitate participant behavior change. CHC staff reported past evaluations based on number of food packages sold, inhibiting them from focusing on other more essential program components. Promoters are responsible for all products and are penalized if anything happens to them, prohibiting them from making home visits when a vehicle is not available. Most promoters reported spending a large portion of their time watching over food package distribution and counting and recounting collected money. Health Promoters acknowledged the shortcomings of the food package, which skews priorities, dissolves trust (because of missing products and lack of transparency), introduces community stigma for those who cannot afford it, and adds additional burdens to already overwhelmed promoters.

Chapter 5: Discussion, Implications, & Recommendations

Discussion & Implications

UKA's nutrition education component has the potential to affect behavior change and empower women to make healthy and nutritious decisions regarding their own well-being and that of their family. However, at the time of study the program faced many limitations in making this a reality. Results show that while nutrition education is expressed verbally as a priority, little to no resources and time are designated to the action. Conversely, food packages are reported as an organizational priority albeit staff reports that they are unlikely to impact participant behavior change. The food packages were reported to dissolve trust between participants and organization staff, introduce stigma to those who cannot afford the food package, and burden already overwhelmed Health Promoters.

Health Promoters reported low levels of job satisfaction and confidence due to a lack of training and capacity, little to no supervision by headquarters, and time spent working. Additionally, participants and Health Promoters report redundancy, comprehensibility, and length of sessions to be major barriers to increased community participation in nutrition education sessions. However, to overcome these barriers and challenges, Health Promoters worked collaboratively at the state level to bridge the disconnect between headquarters' perceptions and community needs. Through creation of a manual focused on increased interactive activities and their ability to build trust with community participants, CHC staff increased efficiency and effectiveness within the nutrition education component.

Headquarters & CHC staff's relationship to the nutrition education component

While staff claimed nutrition education to be the most effective tool for behavior change, it is evident that there are little to no economic or human resources given to this component within the *UKA* program. Headquarters reported difficulty in recruiting new Health Promoters that are well educated, have a health or nutrition background, and have previous experience and training in fieldwork and social work. Due to organizational financial constraints leading to limited compensation and professional growth, there are few qualified applicants to choose from.

Due to the lack of training and support by headquarters, there is a real and probable fear of attrition and decreased quality of CHC staff. While headquarter staff recognized the capability and competency of the Ometepec CHC staff, they feared that they would soon leave the organization[4]. Most of the program's additional actions can be held by lay community members and facilitated by a *UKA* staff member. However, the education component requires knowledge and understanding of behavior change, in addition to detailed health and nutrition information. According to Bhattacharyya & Winch's *Motivational Model*, employers need to recognize employee motives for work such as achievement, affiliation, extension, influence, and control [51] in order to keep employees stimulated and engaged. Additionally, in Strasser and Bateman's *General Model of Work Behavior* promoters are motivated to work if they perceive that their actions will lead to *valued rewards*, such as behavior change by participants [53]. Health Promoters reported that they felt the only way in which participants would change is to

[4] This was a well founded fear, as the majority of CHC staff reported a plan to resign within the following months following the interview. Since the interviews, *UKA* Ometepec CHC manager was promoted within the /organization, and three of the four Health Promoters have left the organization for other career options.

truly understand the behavior's *what*, *why*, and *how*, yet promoters did not feel they had the capacity to adequately inform and educate participants.

Health Promoters additionally felt their work had little value due to inconsistent supervision, workload pressures, and lack of training and capacity. Promoters did acknowledge valuing the vision of the program, but frustration with the lack of support for many important program components. This lack of support contributed to reduced levels of confidence in facilitating participant behavior change. In an ideal program, *UKA's* headquarter staff would have sufficient economic and human resources, and the ability to meet all program needs effectively and efficiently. Unfortunately this is not the reality. However, all levels of staff recognized the importance of training and capacity for CHC staff on nutrition education, group management, conflict resolution, and community needs assessment.

Headquarters & Health Promoters' relationship with communities & participants

Health Promoters reported that their loyalty was to the women and communities not necessarily headquarters. According to the literature, the most important relationship is between community workers and participants, thus headquarters should foster and facilitate this connection in any way possible. While feedback and supervision are critical components of success and retention, employee motivation most often lies with the connection and value seen in one's work. Through facilitation of this relationship, headquarters intrinsically strengthens their own relationship to both the Health Promoter and communities. While attention center staff felt that increased communication with headquarters would assist in organization and prioritization of actions, few foundational

needs (such as training and capacity, supervision, etc.) are being met when specifically looking at the nutrition education component.

Ideally the relationship between the headquarters and CHC should be rooted in a strong foundation of collaboration, including adequate training and support. With this strong foundation, Health Promoters would then be able to facilitate program activities and nutrition education sessions founded in the communities' needs. By participating in the program, women would gain knowledge and experience through activities, workshops, and information given. Due to the fact that headquarters had not assessed communities needs, Health Promoters in Ometepec have been resourceful in bridging the disconnect through a manual and creating interactive components within the nutrition education component. While these efforts may be the most appropriate to ensure locally and relevant content and delivery methods, significant support by headquarters of Health Promoters is needed. Although community needs and education levels vary in each catchment area, staff recognize that basic health information and research should be consistent and applicable to all participants. While information at sessions across all regions should be consistent, community needs and desires are unique. Thus, tailoring sessions and activities to these intricacies is critical to keep communities engaged and active in the learning process.

Health Promoters play a central role in bridging the gap between managerial staff and community participants. One of their roles is to facilitate and assist in participant behavior change through different program activities and actions. Within the *Theory of Planned Behavior* [71] participants make decisions through cultural and community beliefs, other's behaviors, their perceived value of the outcome, and finally their

perceived ability of control and power to change their behavior. In order to foster behavior change, *UKA* must consider and respect the needs and desires of community participants, in addition to their time and willingness to participate. Through this, the Health Promoter and participant relationship will be strengthened and founded in trust, allowing promoters to better facilitate and promote behavior change. By acknowledging and reducing reported barriers to participation, such as redundancy, comprehensibility, and length of sessions, participation will likely increase allowing for potential empowerment and behavior change of women.

A skewed priority: the nutritional package

The nutrition package distributed bi-monthly at sessions, has been reported to dissolve trust between participants and organizational staff, to introduce stigma for those unable to afford the package, and to additionally burden already overwhelmed Health Promoters due to its high prioritization by the organization. While CHC staff has voiced their displeasure in the extra burden and frustrations they face from dealing with the package, they also acknowledge that likely no participants would come if it was not available. Additionally, the program's ability to complete other actions at current levels is economically dependent on participants' bi-monthly payments. No viable solutions were given for an alternative funding source.

One of the major barriers towards trust was the lack of transparency and understanding regarding the food package. Many FGD participants reported dissatisfaction and frustration with the amount or types of food they were receiving in their packages, and when promoters showed up with missing products. Many of these frustrations are additionally linked to not understanding what the payment goes towards.

Participants felt like they were paying for at least half the package cost and should have greater input on what they received, as well as dependability on the consistency of products[5]. Even when women understood that they can attend sessions without purchasing a package, participants reported being embarrassed to show up if they did not have the money, creating a social status barrier for those who might need the services and education the most. In the community survey, the majority of participants ranked anemia surveillance and treatment as the most important component, likely due to the fact that anemia testing costs money at the local health centers, and participants are given iron supplements free of charge if their child is anemic.

Women additionally complained about the program cut-off age being five years of age. With the focus on the package, women felt there were other community members that would greatly benefit from the food package, and that older children and family members should all benefit from the box, not just the mother and young child. Their argument was that a child does not need to stop eating at the age of five. In the past, women have not been asked to significantly contribute, other than monetarily, to the organization, even though they are expectant of services provided. Participants are typically not involved in the creation of the actions, nor have their concerns and needs been addressed at the headquarter level. In regards to the TPB model, the organization does not facilitate or assist women in gaining a feeling of control or power to overcome difficulties. While participants understand why change may be a healthful decision, they have few community members modeling those behaviors and likely do not perceive themselves to have control or power.

[5] Additional information of this issue will be available in Laura Whitaker's thesis on the acceptability and appropriateness of *UKA*'s supplemental packages.

During IDIs and FGDs, participants found it hard to stay on the subject of the nutrition education component, as they had few issues with the sessions. It is likely that those who volunteered to be in the FGD were more likely to be engaged, actively participate, and understand a greater majority of session materials, thus having fewer barriers to face in accessing and understanding information given. The community survey and IDIs supplemented FGD participants' views to give a more rounded view on the successes, barriers, and challenges of the nutrition education component. In the end, Health Promoters' main goal was to empower women to make healthy and wise decisions regarding their own health and that of their children. The CHC's vision is for the promoter to be a facilitator in assisting mothers to help one another until no longer needed in the community. Health Promoters want to see mothers confident in their abilities to provide what is best for their own children. Currently, Health Promoters find it hard to complete these actions due to a lack of training and capacity, limited supervision by headquarters, and excessive workload. While Health Promoters are attempting to bridge this gap, high turnover rates are likely to continue if these issues are not addressed.

Recommendations

This study highlights the foundational, programmatic, and community level barriers impeding empowerment and behavior change of community members. Within the FGDs and even some IDIs, it was evident that nutrition education was not what most participants wanted to focus on. While nutrition education was recognized as being important and helpful, it was of little concern to women. The focus and emphasis of the organization is on the food package and anemia surveillance and treatment. Not

surprisingly, similarly this was the dominant concern (food packages) and appreciation of the program (anemia surveillance and treatment) by participants. For the nutrition education component to become the priority and driving force behind behavior change, the organization must actively prioritize this component through financial and logistical support of CHC staff. Without a fundamental change in prioritization, nutrition education will continue to be supplemental to other components, and will not have a significant impact on behavior change at the community level.

Enhanced structural support between organizational levels, in addition to economic and human resources would help to improve capacity and support, leading to higher levels of programmatic success. Increased supervision, collaboration, site visits, and training and capacity for CHC staff on nutrition education, including group management and conflict resolution, would help to create a strengthened foundational system within the organization. Supported employees would likely have higher retention, more confidence, and a higher satisfaction of work. Through increased communication with and support from headquarters, Health Promoters will also have the opportunity to focus more on enhancing nutrition education, and collaborate with headquarters on community needs assessments, design and development of the curriculum, and training and capacity. These changes will likely increase the pool of quality applicants. However, additional programmatic improvements, for example salary[6], professional growth, support, and reduced workload are likely needed as well.

Currently, Health Promoters are responsible for too many activities with a different headquarter staff member assigned to each project. Prioritizing and reducing

[6] Headquarter staff reported a proposal to change the structure of Health Promoters by having junior level to senior level promoters based on years of work with *UKA*. Promotions would include an increase in pay.

the number of activities for each Health Promoter would allow for focus on the most important components. Additionally, streamlining the process to have one key headquarter staff member for every one to two CHCs would allow CHCs to feel that they have a direct connection to headquarters and a champion for their concerns and needs. Transparency is of the utmost importance in order to build trust and foster collaboration between headquarters and CHCs. This champion, as a headquarter staff employee, would be responsible for explaining all organizational level decisions. As well as give space for CHC level feedback, including possible barriers, issues, or challenges within their state specific context, especially in regards to community needs. Their champion would be able to assist in state level concerns and work with headquarter staff to adapt policies and prioritization to fit specific community needs within catchment areas. Currently, CHC staff feels that their opinions are not valid or heard, even though they have the most direct contact with community level participants. A strong relationship with their champion would help to foster trust and loyalty to the organization by giving CHC staff a voice as well as much needed support by the headquarters.

Additionally, a systematic change to driving regulations is currently needed to decrease stress and workload of Health Promoters. Driving was reported as a major concern due to amount of time spent driving, inability to drive, or lack of confidence in driving ability, which put an extra burden on capable colleagues. The ability to drive must be a requirement for all Health Promoters, in addition to a required training specific to *UKA's* vehicles. More appropriate routes to communities need to be developed to increase efficiency of the program. One option would include sending all promoters out to the same region on the same day with a different truck bringing the packages at a

separate point in time, thus only one person needs to drive and other promoters can work or eat during the drive or while waiting to be picked up after their session. This would also reduce time spent on packages and stress of keeping track of products and money. One employee could be in charge of delivering packages at the end of each session, later that day, or a different day altogether; Health Promoters should not be involved in the delivery of packages. Additionally, the catchment area could be reduced in order to more fully facilitate needs of individual communities closest to the CHC. Conversely, the catchment area could focus more closely on the most remote and needy populations, with a significantly reduced number of communities to allow for increased travel time.

Furthermore, workload for CHC staff would also decrease if curriculum development was streamlined by the headquarter staff. Incorporating a database that has consistent and updated information on nutrition education themes, as well as multiple activities and interactive components available to download would allow Health Promoters to quickly access information and activities and to adapt them as necessary for their community group. A headquarter staff position focused on this project in addition to input and additions from all CHCs would be critical. Local CHCs should have a minimum number of activities or workshops that they create/ adapt each year to foster activities prioritized on community need. These should be shared on the database and be continually updated so that the organization can define and illustrate best practices throughout Mexico. Creation of static manuals, as suggested by headquarter staff, will lead to a constant struggle due to ever changing community needs. A database would be a fluid and adaptable resource tool to incorporate multiple ideas, as well as to make a

current two to three page document on essential and consistent information/ recommendations from reliable and updated sources available to all CHCs.

An increasing concern for all levels of staff was the disregard for specific community needs and participant requests for information not being taught. All staff members understood the importance of implementing monitoring and evaluation techniques to try and combat community needs. Health Promoters have the most capability to understand these needs. If a nutrition education database is created, promoters should be allotted necessary time to understand and identify the needs of their communities. Headquarters should do everything they can to foster assessment work by Health Promoters in addition to assisting in their ability to grow relationships with the communities/ participants.

Additionally, women reported finding session information repetitive, inconsistent (not bi-monthly), and too long. Finding ways to address these issues is one way to give communities a voice, and to begin building trust and understanding between promoters and participants. Consistently beginning sessions on time shows respect of participants' time. Additionally, working with communities to find the best time for the sessions begins the process of collaboration and incorporates their input. During periods when promoters need to work individually or in small groups, other participants should have something to do. Splitting up groups so that participants always have a station or a specific task will decrease boredom and frustration, as well as increase participation time and knowledge. Community assistants, who are selected by CHC staff to help Health Promoters during *UKA* sessions, were reported as being useful. Future utilization of these women during breakout sessions would reduce promoter burden, as well as encourage

women to take on greater leadership roles. Increased participation and knowledge, and decreased boredom and wasted time, will likely assist in higher participant retention and increased community recruitment. A focus on interactive activities and workshops will also increase participation and retention of knowledge.

By fostering an environment that focuses on community needs, participants will be able to understand and incorporate new knowledge into their lives. Currently, 30% of participants reported understanding only a fair amount of the information given by promoters. The ability to adapt and facilitate to all education levels is crucial for health promoters, especially those working in indigenous areas where language is often a barrier. Materials also need to be adapted to group education levels. Increased time spent in individual communities will help facilitate assessments and understanding of community needs, as well as increase stability and trust between the promoter and participants. Participants will see program worth, even if it is not a material good. If women feel there is a value in the program, (e.g. increasing their education on health and nutrition) it is a likely that they will commit to being present and active in sessions. If the program is not focused on them, it is likely they will find little value in the program and choose to come only when it works for them (to receive treatments, tests, food package).

While participants (and sometimes staff) had a difficult time talking in depth about the nutrition education component, there was no lack of discussion and frustration around the supplemental food package. Health Promoters were the first to discuss the negative impacts of the packages on their job satisfaction and relationship with participants. Health Promoters reported a majority of their time was wasted on activities focused on the packages (loading, unloading, watching over the process, counting money,

watching over products/ money to make sure nothing happened to them). CHC staff is adamant that participants would not continue to come if they did not receive the packages. However, focus group participants resoundingly responded they would all continue to come, but then added that many other women would not continue to come. Examples of past decreased participation rates around the package, illustrated the contradictory responses, in addition to the reported fact that most women will/ do not come to the session if they do not have money to purchase a package at the end. Payment for the food package/ services need to be clarified at an organizational level, and then adequately and appropriately explained and executed at the community level. Messages on payment must be transparent and consistent in order to retain participants' trust. While the package draws many participants, it is evident that the majority of the organization's time, effort, and focus go into delivering this component. Without the package, the program would likely have a much smaller group of women focused more directly on the education and development components.

Organizationally it is critical to decide what the true mission of the program is and how it can be accomplished. Package components are inappropriate for certain age groups (e.g. foods in package specific to children when the child is under six months of age, reports and observation that children under six months of age are eating these products). Some communities complained that they wanted more products because they did not have access to some of the products (i.e. powdered milk, amanene) and there was not enough in their package for two weeks, creating a dependence on foods not locally available. Additionally, participants complained that once a child was five years of age they no longer qualified for the assistance. The package insinuates that a family cannot

feed itself, especially when a family becomes dependent on specific foods not accessible in the area. Education on the other hand is not gone after a meal, two weeks, or a month. Knowledge can be shared and learned by other family members, neighbors, and friends. If *UKA* continues to distribute packages, it would be important to make it more age appropriate, focused on locally available foods, and possibly given for a shorter duration of time or less frequently to decrease dependence.

Chapter 6: Conclusions

Strengths and Limitations

The types of curriculum materials and information received from the Ometepec CHC are not generalizable to the whole program and possibly may not be useful within the state of Guerrero in a few years time. Accessing past research and evaluations were difficult to obtain as reports were often not finished or were misplaced. Materials were not organized, nor were they consistent, making a review difficult. Observations of the nutrition education session delivery by Health Promoters were of low quality due to programmatic influences. After completing the seventeen observations, Health Promoters revealed that the supervising Manager from Headquarters in Mexico City had specifically asked them to talk about certain topics in depth while the researcher was present. While these topics would have inevitably been approach during the year, it is not evident that they would have been presented at the same level of depth had the researcher not been present. Education sessions lasted between 25 and 60 minutes when the researcher was present, versus reports of education sessions lasting an average of 30 minutes, when conducted (FGD participants reported education sessions happening an average of once per month).

Community surveys had a high volume of missing data present on three specific questions. Thirty percent of participants did not rank or inappropriately ranked[7] the importance of services given by *UKA*. While approximately one-third of participants misinterpreted the question or chose not to answer, the remaining 70% of participants appropriately answered the question, thus reported answers were included in the

[7] For example: 1's for all six options instead of using numbers 1 through 6, or using a number twice.

descriptive statistics. Additionally, responses to questions 12 and 13 [Appendix C], pertaining to what topics participants have learned and would like to learn about, sometimes had overlapping responses. It is evident that the question was not clear to many respondents, and likely that the community assistants did not give the explanation present, thus the questions were removed from analysis.

The study only involved members of *UKA*, thus there is no information from community members that may have previously participated, but discontinued participation, or Health Promoters and Managers who chose to stop working for *UKA*. The Manager, Health Promoters, and community participants were all part of the Ometepec CHC, and thus not necessarily generalizable to other state level CHCs. Communities that did not speak Spanish as their primary group language and/ or had not been with *UKA* for at least one year were not included in the sample population, thus limiting potential findings on the impact of marginalized groups or common problems within the first year of service. Community participants who were not present at the bi-monthly sessions were not included in the community participant surveys.

While the format of the survey was quantitative, many questions were open-ended or focused on supplementation of the qualitative data previously collected. Materials and observations assisted in understanding the context and structure of the program and education sessions. IDIs and FGDs were appropriately used and aided in the collection of data. All interviewees were willing to share their perceptions and ideas in regards to the program. Researchers were also able to collect additional data through participant observation due to the nature of their work.

Conclusions

UKA's nutrition education component has the potential to affect behavior change and empower women to make healthy and nutritious decisions regarding their own well-being and that of their family. Important future research would include understanding why eligible women who do not come to the sessions have chosen not to participate (those who used to come and stopped, and those who have chosen to never come). Understanding this population is critical to increased recruitment, as well as participant retention. It is likely that many of the issues stated by active participants will be similar reasons, but there is potential for new and essential information within this population.

In order to affect participant behavior change, foundational restructuring, increased support and communication between staff, and interventions focused on community needs are critical to programmatic success of the nutrition education component. Additionally, headquarters will need to address prioritization of components, including prioritizing Health Promoter actions and activities in order to reduce their workload burden. With more time to focus on community needs assessments and building foundational relationships with participants, promoters should likewise work to build sessions that respect participant time and fit the needs of individual communities. Through these actions, with a focus on collaboration and relationship building, *UKA*'s nutrition education component can potentially affect participant behavior change.

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Tables

Table 2: Community Survey: Compiled Responses (N=624)		
	Frequency	**Percent**
16.21% (N=95) of participants' homes have been visited by a Health Promoter (N=586; Missing=38)		
81.82% (N=459) of participants want a Health Promoter to visit their home (N=561; Missing=63)		
90.91% of participants want to bring children to session (N=605; Missing=19; Not important=15)		
33.22% of participants can leave child somewhere during session (N=605; Missing=19; Do not know=31)		
Amount of information wanted during education session: More, Same, Less (N=603; Missing=21)		
More	369	61.19
Same	200	33.17
Less	34	5.74
How often participants want to receive nutrition education sessions: Every two weeks, Once per month, Once every two months (N=601; Missing=23)		
Every two weeks	364	60.57
Once per month	215	35.77
Once every two months	22	3.76
Amount of activities wanted during nutrition education session: More, Same, Less (N=607; Missing=17)		
More	265	43.66
Same	295	48.6
Less	47	7.74
Amount of information understood at nutrition education sessions (N=575; Missing=49)		
All	170	29.57
Majority	225	39.13
Fair	171	29.74
Almost Nothing	9	1.57
Nothing	0	0
Preferred style of information delivery during the nutrition education sessions (N=564; Missing=60)		
Platicas (Talks)	216	38.3
Activities	177	31.38
Workshops	171	30.32
Amount of time preferred for receiving the nutrition education session (N=590; Missing=34)		
<10 minutes	34	5.76
10-15 minutes	119	20.17
20-30 minutes	215	36.44
30-45 minutes	83	14.07
45-60 minutes	32	5.42
>60 minutes	107	18.14
Preference in paying 65 or 80 pesos for different sized food packages (N=523; Missing=101)		
65 pesos	265	50.67
80 pesos	258	49.33
90.93% participants would continue to participate if there were no food package (N=518; Missing=106)		

Table 3: Participant perception of most and least useful information or component of the nutrition education component and *UKA*		
	Frequency	**Percent**
Least useful information received during the Nutrition Education Session (N=284; Missing=340)		
Nothing	191	67.25
Feeding	30	10.56
Package	22	7.75
Other	12	4.23
Anemia	8	2.82
Hygiene	7	2.46
What participant dislikes most about the *Un Kilo de Ayuda* program (N=260; Missing=364)		
Nothing	93	35.77
Package / Products	66	25.38
Wasted Time	58	22.31
Participation Level	9	3.46
Consistency	9	3.46
Nutrition Education Component	9	3.46
Other	9	3.46
Hygiene	7	2.69
Most useful information received during the Nutrition Education Session (N=521; Missing=103)		
Feeding	283	54.32
Care	202	38.77
Anemia	112	21.5
Surveillance (Height/Weight)	39	7.49
Neurological development	21	4.03
Everything	15	2.88
Pregnancy	7	1.34
What participant likes most about the Un Kilo de Ayuda program (N=439; Missing=185)		
Nutrition Education Component	240	54.67
Anemia	85	19.36
Package (Food)	52	11.85
Surveillance (Height/Weight)	44	10.02
Everything	33	7.52
Care	26	5.92
Neurological development	15	3.42
Other	15	3.42
Note: Definitions of variables in Appendix D		

Table 4A: Community survey rating for most important to least important activities provided by *UKA*: Mean Values of Variables (N=438)		
Variable	**Mean**	**Std Dev**
Food (Package Supplement)	3.93	2.07
Anemia Surveillance and Treatment	1.96	1.22
Doctor Visits	3.74	1.43
Nutrition Education	4.06	1.52
Neurological Development	4.17	1.26
Surveillance (Height and Weight Monitoring)	3.15	1.51

Table 4B: Community survey rating for most important to least important activities provided by *UKA*

(N=438; Missing=186)

	Food / Package		Anemia		Doctor Visits		Nutrition Education		Neurological Development		Surveillance (Height & Weight)	
	Freq	**%**	**Freq**	**%**	**Freq**	**%**	**Freq**	**%**	**Freq**	**%**	**Freq**	**%**
1	100	22.8	206	47	20	4.57	34	7.76	6	1.37	72	16.4
2	51	11.6	131	29.9	71	16.2	39	8.9	46	10.5	100	22.8
3	28	6.39	49	11.2	122	27.9	83	19	71	16.2	85	19.4
4	35	7.99	26	5.94	84	19.2	82	18.7	129	29.5	82	18.7
5	49	11.2	18	4.11	74	16.9	111	25.3	115	26.3	71	16.2
6	175	40	8	1.83	67	15.3	89	20.3	71	16.2	28	6.39

Table 5: Participant Observation of Nutrition Education Session: Averages (N=17 observations)	
Number of activities* preformed by Health Promoter	4.5
Number of questions asked by Health Promoter to Participants	15
Number of questions asked by Participants to Health Promoter	0.5
Level of Participation of Community Participants	Mostly Engaged
Level of Privacy	Fair
Attendance Rate	73%
Anecdotal Evidence: location of sessions - basketball court (9), small government building/*comisaria* (4), porch of community museum/government building (2), *zócalo*/park (1), woman's back porch (1); Setting was shaded (13), sun/open (0), mixed (4); in about half of the sessions almost all women stood, in about a quarter of the sessions half or so of the women found somewhere they could sit or brought a bucket/chair while the rest stood, in the other quarter of sessions most participants were sitting on a step or a bench that was part of the area provided (not by UKA, but by the community)	
*__Activities:__ include height/ weight measurements, anemia testing/ surveillance, nutrition education, vitamin distribution, doctor's visit, delivery of nutrition package, and neurological development component	

Appendix A: Delivery Observation Guide

Observation # _____ Municipality: _____ Community Name: _____

Promoter: Region: Mntn Coast Mntn/Coast Ometepec

Theme:	Drive time to community:
Date: ____/____/____ Time Scheduled to Start:	Arrival Time:
Time Started:	Time Ended:
Nutritional education start time:	Nutritional education end time:
Number of Mothers in group:	Number of children in group:
Number of Mothers present:	Number of children served:
Did any mothers come late? Yes No	Number of latecomers:
Number of Men present:	Primary_Caregiver Observer Other
Setting:	
Shaded Sun/Open Mix	Comments:
Chairs available:	Comments:
Places to sit:	
Standing:	
Location held:	Comments:
Surroundings:	
Surrounding Noise level: none low medium high extremely_high	Comments:
Physical formation of group (circle, mass group, etc.):	Comments:

Observation # _____ Municipality: _____ Community Name: _____

Promoter: Region: Mntn Coast Mntn/Coast Ometepec

Design:			
Other information/activities given during session: medical weight/height anemia neuro_dvlpmt food_pack			
Comments:			
UKA Staff members present: Gerente Doctor Additional Health Promoter Other			
Comments:			
Presentation of Information: Plactica Taller		Comments:	
Explanation of taller (workshop/activity):			
Material Used	Why	Comments	How Long
Information given:		Comments:	
Accuracy of information given: excellent good fair poor very poor		Comments:	

Observation # _____ Municipality: _____ Community Name: _____

Promoter: Region: Mntn Coast Mntn/Coast Ometepec

Participant Participation	
Number of Assistants: Commissioned Selected Volunteer	Comments:
Number of times women were asked a question:	Comments:
Their reactions:	
Did promoter give time for questions/comments from group? Yes No	Comments:
Number of times women asked a question:	
Their questions/comments:	
Participation level of women: very_engaged mostly_engaged neither_engaged_nor_disengaged mostly_disengaged very_disengaged	
Comments:	
Privacy level for group: total adequate fair inadequate none	
Comments:	
Document Materials used: Photograph/Photocopy	

Appendix B: In-depth Interview and Focus Group Discussion Guides

IDI Guide for *Un Kilo de Ayuda* Headquarter Staff

Gracias por recibirme hoy. Creo que usted sabe, pero soy Corey McAuliffe y estoy estudiando una Maestría en Salud Publica en la Universidad de Emory. En los próximos meses, voy a tener algunas discusiones de grupo (como focus group) y observaciones del componente de educación nutricional de *Un Kilo de Ayuda*. Voy a revisar las perspectivas de los participantes y de los promotores de salud del programa, así como las fortalezas y debilidades del programa. Su tiempo hoy, va a ayudarme a elaborar las preguntas más acertadas para hacerles a los promotores y a los participantes. Me encantaría escuchar su punto de vista acerca del programa y también su valoración del mismo. No hay respuestas correctas o incorrectas a ninguna de estas preguntas, así que por favor siéntase cómoda de compartir sus pensamientos.

Voy a tomar notas durante la entrevista. Con su permiso, me gustaría grabar esta entrevista con el fin de capturar con precisión sus puntos de vista y opiniones. Todo lo que ustedes digan durante la entrevista, va a permanecer privado y confidencial. Esta grabación solo estará disponible para mí y mis asesores de investigación (nadie de *UKA* va a tener acceso a esta información). Está bien con usted si grabo la sesión?

Qué bueno…vamos a empezar.

Introducción

Me podría usted platicar un poco sobre la historia de *UKA*?

Como empezó la organización? Su Visión? Su Misión? A quien es que ayuda esta organización?

Como ha cambiado en los últimos años?

Siguen las mismas personas trabajando con *UKA* que cuando empezó? Como han cambiado las necesidades de los beneficiados?

Preguntas

1. Específicamente, puede platicarme sobre el diseño y desarrollo del programa de educación nutricional de *UKA*?
   Me puede platicar el currículo de educación nutricional?
   *Que incluye? Proceso del diseño, revisión y aprobación del mismo?
   Quien es el responsable del diseño de los materiales que se están usando?
   *En Guerrero?
   Cuáles son las indicaciones que se usan para asegurar la precisión de la información que es dada?

2. Cuál es la visión de *UKA* para la transmisión de la educación?
   Como se debe difundir la información?
   Como se están repartiendo las materiales? Con que frecuencia? Quien es el encargado de los materiales?

3. Cuál es el rol de los promotores de salud en el programa de educación nutricional?

Como fueron elegidos/proceso de selección? Cuál es el nivel de educación/experiencia que necesitan tener?
Cuales son algunos de los problemas comunes que *UKA* tiene con los promotores? Como han sido abordados estos problemas?
Cómo describiría a un promotor ejemplar?
*Ejemplos específicos? Ejemplos concretos?
Como es que se supervisa a los promotores? En qué consiste la supervisión? Como se garantiza que los promotores cuentan con la información más reciente en cuanto a salud?

4. Cuáles cree que son los puntos de vista u opiniones de los participantes sobre el componente de educación nutricional de *UKA*?
   Que retroalimentación han recibido de los participantes sobre el componente de educación nutricional?

5. Como se estructuran los grupos de participantes/beneficiados?

6. ¿Cómo cree que los comportamientos relacionados con la nutrición han cambiado desde *UKA* comenzó con el programa de educación nutricional?
   Podría ser mas especifica en cuanto historias exitosas?
   Puede describir algunos retos en particular que *UKA* ha tenido en relación a cambios en el comportamiento?

7. Cómo definiría el programa de educación nutricional como un éxito?
   Como mediría esto?

8. Cómo definiría el programa de educación a partir de ahora?
   Por qué?
   El programa se puede modificar? De qué manera?
   Quien o Quienes son necesarios para lograr estos cambios?

Closing Questions

Cree que esto resume de manera precisa el programa educación nutricional de *UKA*? Hay algo que falte por mencionar?

Tiene alguna idea de cosas que serian importantes de preguntar a los promotores de salud y/o miembros de la comunidad?

Muchísimas gracias por su tiempo. Esto va a ayudarme muchísimo a conocer cuáles son las preguntas más adecuadas para entrevistar a los promotores y participantes durante este verano. Estoy segura de que conforme empiece a aprender más del programa, especialmente del de Guerrero, me irán surgiendo nuevas dudas. Estaría bien con usted, si la contacto posteriormente para hacerle otras preguntas? Otra vez, muchísimas gracias por tomar se el tiempo para hablar conmigo y compartir sus puntos de vista y opiniones. Gracias.

IDI Guide for Un Kilo de Ayuda Manager

Gracias por recibirme hoy. Sabes soy Corey y estoy estudiando una Maestría en Salud Publica en la Universidad de Emory. En los próximos meses, voy a tener algunas discusiones de grupo (como focus group) y observaciones del componente de educación nutricional. Voy a revisar las perspectivas de los participantes, de los promotores de salud del programa, y tu perspectiva así como las fortalezas y debilidades del programa. Tu tiempo hoy, va a ayudarme a elaborar las preguntas más acertadas para hacerles a los promotores y a los participantes. Me encantaría escuchar tu punto de vista acerca del programa y también tu valoración del mismo. No hay respuestas correctas o incorrectas a ninguna de estas preguntas, así que por favor siéntate cómodo de compartir tus pensamientos.

Voy a tomar notas durante la entrevista. Con tu permiso, me gustaría grabar esta entrevista con el fin de capturar con precisión tus puntos de vista y opiniones. Todo lo que tú digas durante la entrevista, va a permanecer privado y confidencial. Esta grabación solo estará disponible para mí y mis asesores de investigación (nadie de *UKA* va a tener acceso a esta información). Está bien contigo si grabo la sesión?

Qué bueno…vamos a empezar.

Introducción

1. Cuando y porque empezaste a trabajar con *UKA?*
   1ª.Porque tienes interés en este tipo de programa?

2. Como ha cambiado tu trabajo en los últimos años?
   2ª.Como han cambiado las necesidades de los beneficiados?

Preguntas

3. Puedes platicarme sobre el diseño del programa de educación nutricional aquí en Guerrero?
   3ª. Me puedes platicar del currículo de educación nutricional?
   3b. *Que incluye? Proceso del diseño, revisión y aprobación del mismo?
   3c. Quien es el responsable del diseño de los materiales que se están usando?
   *El desarrollo de las materiales?
   3d. Cuáles son las indicaciones que se usan para asegurar la precisión de la información?

4. Cuál es el rol de los promotores de salud?
   4ª. Cuál es el proceso de elegir o seleccionar? Cuál es el nivel de educación/experiencia que necesitan tener?

5. Cuales son algunos de los problemas comunes que tienes con los promotores?
   5ª. Como han sido abordados estos problemas?
   5b. Cómo describiría a un promotor ejemplar?
   5c. Como es que se supervisa a los promotores?
   5d. En qué consiste la supervisión?
   5e. Como se garantiza que los promotores cuentan con la información más reciente en cuanto a salud?

5f. Como se debe difundir la información?
5g. Como se están repartiendo las materiales? Con que frecuencia?
5h. Quien es el encargado de los materiales?

6. Cuáles cree que son las opiniones o puntos de vista de los participantes sobre el componente de educación nutricional?
   6ª. Que retroalimentación (feedback) han recibido de los participantes sobre el componente de educación nutricional?
   6b. *Como han recibido este retroalimentación? *Preguntas, entrevistas, informes?

7. Como se estructuran los grupos de participantes/beneficiados?

8. ¿Cómo cree que los comportamientos (behaviors) relacionados con la nutrición han cambiado desde *UKA* comenzó con el programa de educación nutricional aquí en Guerrero?
   8ª. Podría ser mas especifica en cuanto historias exitosas?
   8b. Puede describir algunos retos (challenges) en particular que ustedes han tenido en relación a cambios en el comportamiento?

9. Cómo definiría el programa de educación nutricional como un éxito?
   9ª. Como mediría esto?

10. Cómo definiría el programa d educación a partir de ahora?
    Por qué?
    10ª. El programa se puede modificar? De qué manera?
    10b. Quien o Quienes son necesarios para lograr estos cambios?
    *Que necesitan?

    Conclusión
    Hay algo que falte por mencionar?

11. Tiene alguna idea de cosas que serian importantes de preguntar a los promotores de salud y/o miembros de la comunidad?

    Muchísimas gracias por su tiempo. Esto va a ayudarme muchísimo a conocer cuáles son las preguntas más adecuadas para entrevistar a los promotores y participantes durante este verano. Estoy segura que voy a tener más preguntas en el futuro y espero que este bien contigo si voy a preguntarte mucho en las próximas semanas. Otra vez, muchísimas gracias por tomar tiempo para hablar conmigo y compartir tus puntos de vista y opiniones. Gracias.

IDI Guide for Un Kilo de Ayuda Health Promoters

Gracias por recibirme hoy. Sabes soy Corey y estoy estudiando una Maestría en Salud Publica en la Universidad de Emory. En los próximos meses, voy a tener algunas discusiones de grupo (como focus group) y observaciones del componente de educación nutricional. Voy a revisar las perspectivas de los participantes, tu perspectiva, y las perspectivas de tus compañeros, así como las fortalezas y debilidades del programa. Tu tiempo hoy, va a ayudarme a elaborar las preguntas más acertadas para hacerles a los participantes del programa. Me encantaría escuchar tu punto de vista acerca del programa y también tu valoración del mismo. No hay respuestas correctas o incorrectas a ninguna de estas preguntas, así que por favor siéntate cómodo de compartir tus pensamientos.

Voy a tomar notas durante la entrevista. Con tu permiso, me gustaría grabar esta entrevista con el fin de capturar con precisión tus puntos de vista y opiniones. Todo lo que tú digas durante la entrevista, va a permanecer privado y confidencial. Esta grabación solo estará disponible para mí y mis asesores de investigación (nadie de *UKA* va a tener acceso a esta información). Está bien contigo si grabo la sesión?

Qué bueno…vamos a empezar.

Introducción

1. Cuando y porque empezaste a trabajar con *UKA?*

Key Questions

2. Cuál es tu rol de un(a) promotor de salud?
   2ª. Como estas difundiendo la información a la comunidad?

3. Puedes platicarme sobre tu parte en el diseño del programa de educación nutricional?
   3ª. Donde estas encontrando el información que te usas? Cuáles son las indicaciones que te usas para asegurar la precisión de la información?
   3b. Como te sientes acerca de la capacitación y la información dada por Un Kilo de Ayuda?
   3c. ¿Qué recursos tienes disponibles que son más útiles en tu trabajo?
   3d. ¿Qué recursos no tener, pero te ayudaría en tu trabajo?

4. Cuales son algunos de los problemas comunes que tienes en tu trabajo?
   4ª. Como has sido abordados estos problemas?

5. Cuáles crees que son las opiniones o puntos de vista de los participantes sobre el componente de educación nutricional?
   5ª. Que retroalimentación (feedback) has recibido de los participantes sobre el componente de educación nutricional?
   *Como has recibido este retroalimentación? *Preguntas, entrevistas, informes?

6. Como son los comportamientos de los participantes acerca de la lactancia materna?
   6ª. Alimentación complementaria?
   6b. Diarrea?

7. ¿Cómo crees que los comportamientos (behaviors) relacionados con la nutrición han cambiado comenzaste tu trabajo con *UKA* aquí en Guerrero?
   7ª. Puedes describir algunos éxitos (successes) en particular que has tenido en relación a cambios en el comportamiento?
   7b. Puedes describir algunos retos (challenges) en particular que has tenido en relación a cambios en el comportamiento?

8. Cómo definiría el programa de educación a partir de ahora?
   Por qué?
   8ª. El programa se puede modificar? De qué manera?
   8b. Quien o Quienes son necesarios para lograr estos cambios?
   *Que necesitas?

   Closing Questions
   Hay algo que falte por mencionar?

9. Tiene alguna idea de cosas que serian importantes de preguntar a los miembros de la comunidad?

   Muchísimas gracias por su tiempo. Esto va a ayudarme muchísimo a conocer cuáles son las preguntas más adecuadas para entrevistar a los promotores y participantes durante este verano. Estoy segura que voy a tener más preguntas en el futuro y espero que este bien contigo si voy a preguntarte algunas cosas en las próximas semanas. Otra vez, muchísimas gracias por tomar tiempo para hablar conmigo y compartir tus puntos de vista y opiniones. Gracias.

Focus Group Discussion Guide

Research Question: How can the design, delivery and user uptake of the nutritional education component be improved upon? Purpose: To inform a quantitative survey

SECTION 1: INTRODUCTION

Gracias por recibirme hoy. Me llamo Corey McAuliffe y estoy estudiando una Maestría en Salud Pública en la Universidad de Emory en Atlanta, Georgia en Los Estados Unidos. En el próximo mes, voy a tener algunas discusiones de grupo focales, como este, con la gente en el programa de UKA. Estoy interesada de sus perspectivas, puntos de vistas, cosas que le gusten o no le gustan a ustedes, a conocer cómo podemos mejorar las platicas durante las sesiones de UKA. Por favor, no se sientan tímidas a expresar sus pensamientos. Todas las opiniones son muy importantes. También, por favor respeten los pensamientos y opiniones de los otros, todos de nosotros tenemos ideas diferentes y no hay respuestas correctas o incorrectas a ninguna de estas preguntas.

No soy una empleada de UKA. Soy una estudiante trabajando aparte del programa. Solamente estoy ayudando a ellos como alguien afuera del programa. Todo los que

ustedes digan durante el grupo va a permanecer privado. No voy a decir sus repuestas individuales a los promotores o al gerente. Por esa razón yo quería ir a un lugar donde no puedan escucharnos. Nada que ustedes van a decir durante esto tiempo va a cambiar su situación con UKA. Quisiera que ustedes puedan tener confianza en mí y decirme cualquier cosa. También, yo pido que ustedes no vayan a compartir la información que otras están dando. Quiero que este lugar se siente seguro y cómodo por todas.

Voy a tomar algunas notas durante la sesión para recordar todos sus pensamientos. Con sus permisos, me gustaría grabar esta discusión con el fin de capturar con precisión sus puntos de vista y opiniones. Esta grabación solo estará disponible para mí y mis asesores de investigación (nadie de UKA va a tener acceso a esta grabación). Está bien con ustedes si grabo la sesión?

Check with each woman individually; Bueno, vamos a empezar. Primero, quiero pedirles sus nombres. Tal vez cada persona puede decir su primer nombre y la edad de su niño en el programa (o si está embarazada).

SECTION 2: Describe the UKA nutrition education program

1. Puede decirme cuales son las actividades que UKA hace en su comunidad?

2. Quisiera hablar específicamente sobre la actividad de educación nutricional (o sea las platicas) de UKA

   Follow up / Probes:

   a. Cuál es la forma en que UKA está dando las platicas (están por las casas, sesiones de grupo, etc.)?
   b. Que pasa durante un sesión normal de la plática?
   c. Que tipos de cosas o temas están discutido durante la plática?
   d. Quien generalmente está encargado de la plática?
   e. Usualmente, como le presenta la información entre las platicas (lecturas, platicas, demonstraciones)?
   f. De estos cual piensa usted que es más útil?
   g. Usualmente, quien está en estas pláticas?
   h. Usualmente, que hace la gente quien están presente en las platicas (hacen preguntas, participa en las discusiones, hacen actividades, hacen demonstraciones, o están durmiendo, hablan con amigas, etc.)?

3. (Have they answered this already?) Usualmente, que tipo de información de nutrición escuchan los participantes de UKA, como atendieron una plática?

4. Describan la más reciente plática de UKA en la comunidad (Que tipo de mensajes les dieron? Había actividades? Recetas? Consejos? Recomendaciones?)?

SECTION 3: Perceptions of the program

Ahora quisiera platicar sobre el información que el/la promotor(a) da durante la plática.

1. Como usan la información que está dando en la plática?
   - **a.** Ustedes piensan que la información es útil?
   - **b.** Que son las cosas más útiles que ustedes han aprendido en las platicas?
   - **c.** Que son las cosas menos útiles?
   - **d.** Hay cosas que quisieren aprender pero que no habían discutido en las platicas?
   - **e.** UKA da una plática aquí en la comunidad y hay otras organizaciones o el centro de salud quien están dando información a ustedes. Como se compara la información en las pláticas de UKA por otras organizaciones o de los centros de salud en la comunidad?
   - **f.** El programa de UKA puede cambiar en qué manera para ser más útil al grupo?

2. Con respecto a las cosas que hablemos durante esta sesión, pueden describir una plática que a la comunidad le gustaban más de UKA.
   Probes: Porque? Como fue lo mismo o diferente de otras platicas?

3. En respecto a las cosas que hablemos durante esta sesión, si una amiga suya había pensado que ella quiere participar en las pláticas y quería dar su opinión, que va a decir a ella?

4. Si el programa no va a dar paquetes a la comunidad en el futuro, pero siguen con los otros servicios (como pruebas de anemia, medir y pesar, educación sobre la salud de los niños, etcétera) seguirían viniendo a la reunión? Porque si, o porque no)?

SECTION 4 CLOSING:

En respecto a las cosas que hablemos durante el sesión, si tenía 20 minutos con el director o presidente de UKA, que le diría para mejorar las platicas de UKA? Hablamos de muchas cosas hoy. Quiero saber si hay algo que falte por mencionar que ustedes piensan es importante conocer?

Muchísimas gracias por su tiempo hoy. Esto va a ayudarnos muchísimo a mejorar el programa para ustedes y sus niños. Gracias por tomarse el tiempo para platicar conmigo y compartir sus puntos de vista y opiniones. Si tiene algunas dudas o preguntas siéntase libre a preguntarme ahora o después. Gracias.

Appendix C: Community Survey

Este censo es para ayudar a *Un Kilo de Ayuda* a mejorar sus sesiones de educación nutricional (pláticas y talleres). Esto censo es completamente voluntario y anónimo. Usted no necesita responder a ninguna de estas preguntas si no quiere. Por favor, no ponga su nombre en este papel. Si responde o no, por favor ponga el censo adentro del sobre que tiene la comisionada. Muchas Gracias!

1. **Favor de clasificar los siguientes servicios de *Un Kilo de Ayuda* <u>del 1 al 6 en orden de importancia</u> para usted y su familiar en cuanto a la salud y bienestar de su niño (1= más importante, 6=menos importante). <u>No repetir ningún número.</u>**

   ____ Paquete Nutricional
   ____ Detección y Tratamiento de Anemia
   ____ Visitas de la Doctora
   ____ Pláticas, Talleres y Educación Nutricional
   ____ Neurodesarrollo y Estimulación
   ____ Vigilancia Nutricional (Medir y Pesar)

2. **¿Qué edad tiene su niño o niños, que están en el programa? (Encerrar todas en un circulo)**

   Embarazada 0-5 meses 6-11 meses 1 año – 1 año 5 meses

   1 y ½ años – 1 año 11 meses 2-3 años más de 3 años

3. **¿Ha venido alguien de *Un Kilo de Ayuda* a visitar su hogar? (Encerrar en un circulo)** SI NO

   ¿Quisiera que alguien de *Un Kilo de Ayuda* visite su hogar? (Encerrar en un circulo) SI NO

   ¿Por qué sí o no?
   _____

4. **¿Cuál es la información más útil que ha aprendido durante una plática de *Un Kilo de Ayuda?***
   _____

   ¿Cuál es la información menos útil que ha aprendido durante una plática de *Un Kilo de Ayuda?*
   _____

5. **¿Cómo clasificaría a su promotor de *Un Kilo de Ayuda* quien está encargado de las pláticas? (Encerrar en un circulo)**

   Excelente Bueno Más o Menos Mal

   ¿Cómo clasificaría su propia participación durante las pláticas? (Encerrar en un circulo)

   Excelente Bueno Más o Menos Mal

   ¿Cómo clasificaría la participación del grupo en general durante las pláticas? (Encerrar en un circulo)

   Excelente Bueno Más o Menos Mal

6. **¿Preferiría traer o dejar a su niño(s) a las sesiones de *Un Kilo de* Ayuda? (Encerrar en un circulo)**

   Dejarlo(s) Traerlo(s) No importa

¿Es posible dejar a su niño(s) en su hogar o con alguien durante las sesiones de *Un Kilo de* Ayuda? (Encerrar en un circulo)

Sí No No sé

7. **¿Preferiría que los promotores den más, menos, o la misma cantidad de información durante una sesión de *Un Kilo de Ayuda*? (Encerrar en un circulo)**
   Más Menos Igual

   ¿Por cuánto tiempo preferiría que los promotores den pláticas en sesiones de *Un Kilo de Ayuda*? (Encerrar en un circulo)

   Cada 2 semanas Una vez al mes Una vez cada dos meses

   ¿Preferiría que los promotores hagan más, menos o la misma cantidad de actividades o talleres durante una sesión? (Encerrar en un circulo)
   Más Menos Igual

8. **¿Cuánta información siente que entiende de la que el promotor está dando durante las pláticas o talleres de *Un Kilo de Ayuda*? (Encerrar en un circulo)**
   Todo Mayoría Más o Menos Casi Nada Nada

9. **¿Cuál de estas formas le ayuda más a usted a entender la información nutricional; las pláticas del promotor, hacer actividades o hacer talleres? (Encerrar en un circulo)**
   Pláticas Actividades Talleres de comida

10. **En general, ¿por cuánto tiempo quisiera escuchar una plática o hacer un taller durante la visita de *Un Kilo de Ayuda*? (Encerrar en un circulo)**

    Menos de 10 min 10-15 min 20-30 min 30-45 min 45-60 min 1+ hora

11. **¿Qué es lo más importante que ha aprendido en una plática de *Un Kilo de Ayuda*?**
    _____

12. **¿Sobre qué le gustaría aprender o saber más en una plática o un taller, <u>algo de lo que no se haya hablado antes</u> de *Un Kilo de Ayuda*? Ponga una X en las opciones que le parezcan.**
    ____cómo cocinar nueva comida ____los peligros de auto-medicar
    ____ cuidar a un niño enfermo ____ primeros auxilios para niños
    ____ cómo hacer agua segura ____ higiene personal
    ____ higiene social ____ cómo evitar/tratar diarrea
    ____cómo evitar/tratar anemia ____cómo hacer una hortaliza
    ____ cómo evitar/tratar la gripa ____ cómo usar los alimentos del paquete
    ____ preparar comida sana y almacenamiento ____cómo evitar/tratar lombrices/parásitos
    ____ cómo alimentar a un bebé de 6-12 meses ____cómo alimentar a un niño mayor de 12 meses
    ____ cómo evitar/tratar enfermedades respirator ____ cómo tener un embarazo y un parto seguro
    ____ como manejar problemas de amamantación
    ____ cómo extraer y almacenar la leche materna de forma segura
    ____ estrategias para alimentar niños melindrosos (que se niegan a comer)
    ____cómo ayudar al desarrollo mental de los niños ____ **Otro (escríbalo aquí por favor)**
    _____

13. **¿Le gustaría saber más sobre algo de lo que el promotor haya dicho en una plática de *Un Kilo de Ayuda*? Ponga una X en las opciones que le parezcan.**
    ____cómo cocinar nueva comida ____los peligros de auto-medicar
    ____ cuidar a un niño enfermo ____ primeros auxilios para niños
    ____ cómo hacer agua segura ____ higiene personal

____ higiene social ____ cómo evitar/tratar diarrea
____cómo evitar/tratar anemia ____cómo hacer una hortaliza
____ cómo evitar/tratar la gripa ____ cómo usar los alimentos del paquete
____ preparar comida sana y almacenamiento ____cómo evitar/tratar lombrices/parásitos
____ cómo alimentar a un bebé de 6-12 meses ____cómo alimentar a un niño mayor de 12 meses
____ cómo evitar/tratar enfermedades respirato ____ cómo tener un embarazo y un parto seguro
____ como manejar problemas de amamantación ____cómo ayudar al desarrollo mental de los niños
____ cómo extraer y almacenar la leche materna de forma segura
____ estrategias para alimentar niños melindrosos (que se niegan a comer)
____ cómo usar los alimentos del paquete ____ **Otro (escríbalo aquí por favor)**
_____

14. **¿Qué le gusta más sobre el programa de *Un Kilo de* Ayuda?**
_____

15. **¿Qué le gusta menos sobre el programa de *Un Kilo de* Ayuda?**
_____

16. **¿Preferiría pagar 80 pesos y recibir 1 kilo de arroz y 1 kilo de azúcar; o preferiría pagar 65 pesos y recibir ½ de kilo de arroz y ½ kilo de azúcar en su paquete? (Encerrar en un circulo)**

    80 pesos (1 kilo) 65 pesos (½ kilo)

17. **¿Si el programa <u>NUNCA</u> diera paquetes a la comunidad en un futuro, pero siguiera con los otros servicios (Como pruebas de anemia, medir y pesar, educación sobre la salud de los niños, etcétera) seguiría viniendo a la reunión?** Sí No

    ¿Por qué sí o por qué no?_____

Appendix D: Community Survey Definitions

Categorization and definition of community survey open-ended questions: Participant perception of most and least useful information/ component	
Least useful information received during the Nutrition Education Session	
Nothing	Nothing; everything is important; everything is useful; nothing has little importance; everything serves us; everything is very efficient; all platicas are interesting; it all serves me well; we like it all; we like to learn; useful for the well-being of my child; it is a good program; there is none
Feeding	How we should feed our children (based on ages); feeding; feed well; what children eat; how to nourish; how to prepare foods; when to give foods; how to give food; use of foods; how to prepare X food; amanene; giving of prohibited foods; feeding a baby
Package	What we're told about the package; to not take the package; receive package; the package; everything about package; amanene; when the package is not complete; bringing amanene and learning about it; lessen items in package; package more expensive; what is in the package
Other	How to weigh/measure; neurological development; when I don't understand; stimulation; knowing the nutritional state; vitamins; nutritional surveillance; how to breastfeed
Anemia	Anemia; anemia detection; what anemia is; how to make food with iron; know if a child has anemia; how to prevent anemia
Hygiene	Hygiene; how to care for children; house cleaning; how to be hygienic; about the flu/colds; washing hands
What participant dislikes most about the Un Kilo de Ayuda program	
Nothing	In reference to question fifteen (open-ended): what do you like least about the UKA program (Categorized as: 1= nothing, 2= wasted time, 3= participation level, 4= package/product, 5= consistency, 6= NEC, 7= hygiene, 8= Other, 99=missing: see open-ended questions for definitions)
Package / Products	Price of the package; what they tell us about the package; know less about the package; obligatory to take the package; the price of the package is rising; they forget/do not have the package; marzipan; when they don't bring the full package; price is high; the package; don't have specific products or do not bring specific products; it is expensive; less in packages; amanene, minsa; don't give us all the foods; repairing products (bringing them later); price change in the package; have 2 children but can't have 2 packages
Wasted Time	Takes a long time when they are weighed; something the group gets out late; sessions are long; some people come late; waiting for everyone; sometimes longer than 2 hours; platicas are long; people not punctual; the whole session is platica; the schedule; UKA shows up late; lost time; the time that passes; too long for the children (they misbehave); not punctual
Participation Level	Some women don't like to participate; women who aren't interested; when people talk during the platicas; those who don't participate; not everyone participates; children crying; don't do the activity; some come for the package but don't care about the platicas
Consistency	Doctor doesn't come more often; sometimes they don't come every 14 days; don't always take weight/height of children; that they don't come every week; they don't always complete what they say they will; sometimes not enough time to do the activities; the promoter sometimes gets mad; changed the promoter
Nutrition Education	The workshops; (some) platicas; when there isn't a workshop or the platica is boring

Component	
Other	That they pass a list; bad rumors; they give treatment to children with anemia; anemia test; about pregnancy; they always say the same thing; that the platica is shorter
Hygiene	That my child can't get dirty; the children can't play on the ground; children's hygiene; washing hands; some children have little personal hygiene
Most useful information received during the Nutrition Education Session	
Feeding	Food; feeding; vegetables; fruits; how to feed children; what to give children at specific ages; eat nutritiously; know about nutrition; know about food/feeding; how to keep foods clean; washing of foods; sanitation around food/feeding; prepare different foods; prepare amanene; give better foods; utilize products from package; what to give to children so they are healthy; how to prepare foods; disinfect foods; how many times to feed children; give certain foods; how to take care of foods; each different foods (variety); healthy eating; to nourish; give amanene; nutrition; balanced diet; specific products from package; should use all the products in the package; how long a baby needs to eat
Care	Care; do not fall into malnutrition; how to care for children give them attention; what to give children (or do) so they don't get sick; better care; learn to care for my child; how to treat children; how to prevent disease; health of children; keep children clean; hygiene; better living standards; combat/prevent malnutrition; prevent diarrhea; wash hands (after the bathroom); cleanliness; take care of illness; prevention; how to protect from infections; how to treat children; how to avoid/prevent diarrhea; care for the nutrition and health; (no) self medication; family hygiene; detect malnutrition; malnutrition; important to know about malnutrition; protect of children; contagious infections; parasites; maintain children's health; maintain a clean child; how to treat diarrhea; treatment; first aid; prevent illness; take child to health center if sick; wash hands before cooking; clean containers; UKA serves us; they (UKA) come to see the children; prevent vomiting; combat malnutrition; prevent flu/cold; how to use medications; combat malnutrition
Anemia	To have good blood, to prevent anemia, anemia, anemia test, give iron, anemia detection, anemia treatment, how to avoid anemia, that my child doesn't have anemia, they give anemia treatment, give medication for anemia, to care for anemia, checking anemia is important, help children not be anemic, to know about anemia, to detect anemia, combat anemia, check anemia every 2 months, the importance of anemia, to improve anemia, information about anemia, how to cure anemia, to know if my child is anemic or not, hemoglobin test, learned about the sickness anemia, how you develop anemia, anemia platicas, how to eliminate anemia
Surveillance (Height/Weight)	Surveillance of weight and/or height; children are of a good weight/height; weight and height are important; how to take care of a child so they are a good weight/height; better their weight/height; watch that our children grow well; what to give children so they gain weight; better weight/height of child; how to help my child grow; how to weigh and/or measure the children; surveillance platica; to check the weight; to not lose weight; weigh/measure children every 14 days/every 2 months; their weight/height is important; to know the correct weight of my child; to be vigilant; how to have a good weight/height; to maintain a good weight/height; where they need to be for their age; continue growing
Neurological development	The form in which the children develop; stimulation; development; how to play; teaching them to play, learn, and other things; important to help with development; neurological development; healthy development; help children have good development
Everything	Everything; everything is useful; everything is important; I like everything
Pregnancy	How to care for a pregnancy, weaning, breastfeeding, lactation

What participant likes most about the Un Kilo de Ayuda program	
Nutrition Education Component	Go to platicas; information they give us; the platicas; more platicas; how to prepare; workshops; activities; X platica; orientation; listen to more platicas; learn strategies to prevent diseases; learn new things; how to feed them and take care of them; nutritional information; prepare foods; feed children; (tips) how to care for children; know better things; know if my child is malnourished; have more hygiene; combat malnutrition; make foods in teams; nutritious foods; important platicas; what makes children sick; that they explain things well (about X); should be more workshops/platicas; information about health; how to maintain healthy children; first aid; activities; food strategies; strategies; prevent diarrhea; learn to cook (certain foods); make new foods; how the promoter explains things; nutrition; attention; helping sick children; explanation and elaboration of illness and feeding; teach new rules for preparing foods
Anemia	Anemia tests; what they give the children with anemia; anemia detection; anemia treatment; control anemia for free; prevent anemia; avoid having anemia; see if child has anemia; cure anemia; know about anemia; teach us how to take care of a child so they do not have anemia; give iron; hemoglobin tests; to know about anemia; help us to not have anemia; check anemia; prevent anemia with iron; tell me if my child has anemia; tell pregnant women if they have anemia and treat them; platicas about anemia
Package (Food)	The package is more complete and will cost less; bring more things; when things are not forgotten from the packages; because they give me more things and it costs less; more products; specific products from package; I like it when they give more things (X specific thing); when they give me more products; everything the package contains; more things for the same price; when they add extra things to the package; to have other products that are just as nutritious; complete package; brings foods that cost less and are nutritious; the nutrition package; the package; give us other products; if they would help me more with the package; there should be more products; function of the products; they don't raise the price of the package again; the food to eat for our children
Surveillance (Height/Weight)	Know height/weight of children; control of height/weight; weigh/measure children; platicas about weight; constant surveillance of weight/height; tell us how our children's weight/height are; weight/height is important; weight/height; review children who are underweight; nutritional surveillance; don't leave underweight children; check growth; continue gaining weight; we know how our children are growing
Everything	Everything; I like everything; I like to learn new things; I like everything from the Kilo; I like everything they do in the program; we need it a lot; everything without exception; everything is important
Care	Did not bring package, but continued to visit community; doctor visits; treat diseases; that they worry for our children; the way promoters treat us; medical attention; the way they treat the children; help the children; they built trust with our children; they help us; they worry for us; the attention; attend my child; the services they bring my child; behavior of the promoters
Neurological development	When/how/what the children play; activities with children; neurological development workshops; capacitate, teach, help us with neurological development; what/how they teach the children; children participating in activities; teach us things to educate our children; development; play games with children; crafts to motivate children; how the children have fun when they do exercises
Other	Help with vitamins (n=10); coexistence with other children (with other women) (n=3); medicines (n=2)
NOTE: When questions were answered inappropriately (did not fit or make sense) they were marked as missing.	